AEROSOL AGE

THE MAGAZINE OF PRESSURE PACKAGING

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IN THIS ISSUE:

Canadian Aluminum Containers
Perfume Propellant Cartridge
Aerosol Movie Device
Notes From Europe
Fire and Safety Considerations
Spray Can Handle
Aerosols at Mich. State

MARCH, 1960

IF YOU ARE CONSIDERING AEROSOL PACKAGING FOR INCREASED PHARMACEUTICAL SALES...

PFIZER HYDROCORTISONE, NEOMYCIN, POLYMYXIN AND VITAMINS WILL INTEREST YOU!

Firmly convinced that aerosol dispensers can open new doors to pharmaceutical sales, Pfizer continues to cooperate closely with the pressure packaging industry.

The purpose: To develop formulations that will permit pharmaceutical manufacturers to use most profitably the advantages inherent in pressure-packed containers.

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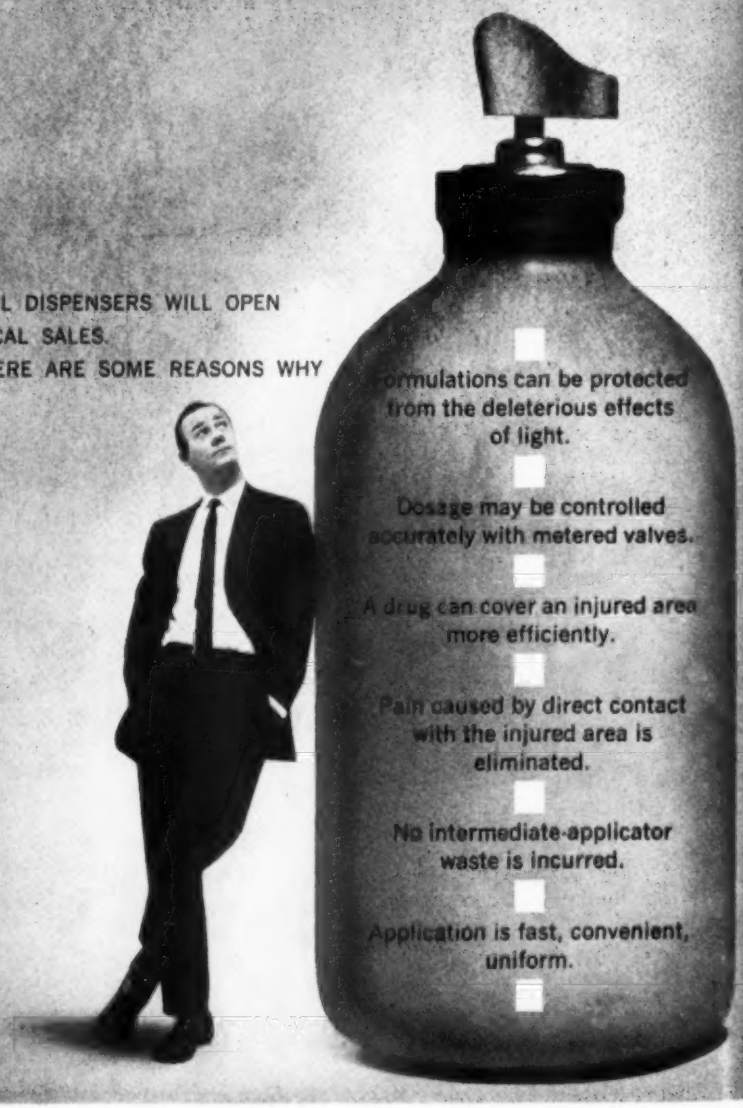
PFIZER BELIEVES THAT AEROSOL DISPENSERS WILL OPEN NEW DOORS TO PHARMACEUTICAL SALES.

HERE ARE SOME REASONS WHY



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packaged with

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Sales success in aerosol products depends as much on the performance of the package as on the quality of the product itself. How important, then, to exercise *extra care* in the selection of the spray valve—the most important factor in pressurized packaging performance!

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THIS MONTH'S COVER

The first aerosol permanent wave was officially put on the market last month by Caryl Richards, Inc., New York. Called "Aero Wave," it was developed by chemists of the marketing company and by those of its custom filler, Aerosol Techniques, Inc. Bridgeport, after two years of research. Rayette Co., of St. Paul, earlier introduced an aerosol neutralizer. Container is aluminum unit by Peerless Tube Co., Bloomfield, N. J., and valve is by Precision (with special adapter designed by Caryl Richards). Additional data on the product appears on page 55.

MARCH, 1960 VOL. 5, No. 3

AEROSOL AGE

The magazine of pressure packaging

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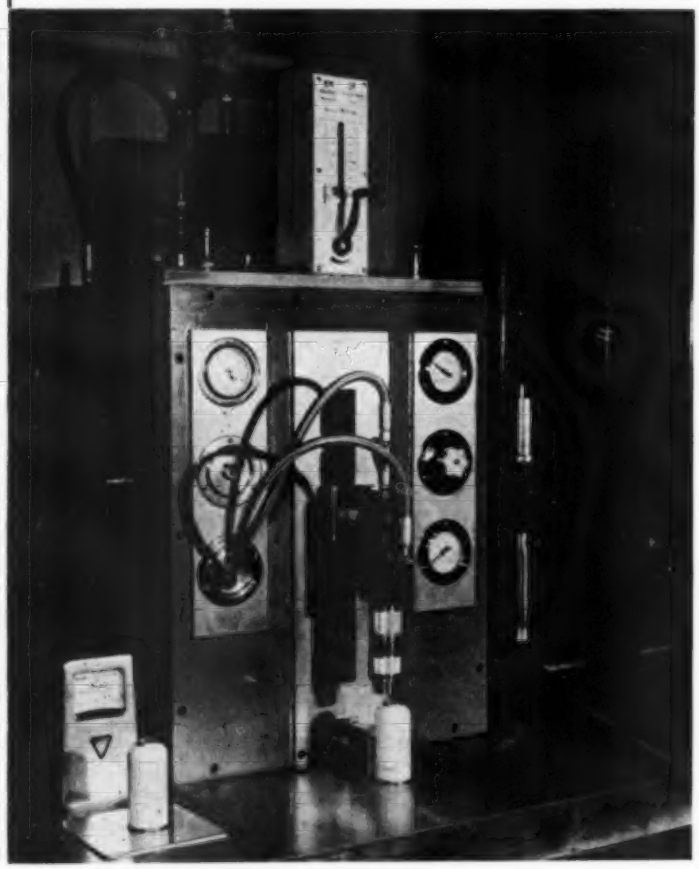

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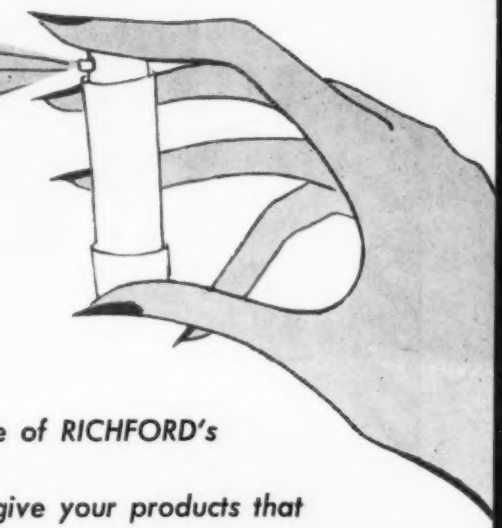

the beauty and elegance of RICHFORD's aerosol containers give your products that eye-catching "plus value" to insure retail sales.

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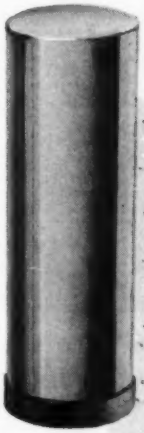
Wide choice of color and color combinations in refillable plastic containers. Available in 2 styles of spray heads with brass shell in polished or design background.



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Central Division: 135 S. La Salle St., Chicago 3
Pacific Division: Russ Building, San Francisco 4
Canadian Division: 790 Bay Street, Toronto 1
Cuban Office: Apartado 1709, Havana, Cuba

INDUSTRY MEETING CALENDAR

Society of Cosmetic Chemists, New York Chapter, Hotel New Yorker, New York.....March 2

Society of Cosmetic Chemists, Chicago Chapter, Henrici's Restaurant, Chicago .....March 8

Congress for Pharmacists, St. John's University College of Pharmacy, Jamaica, N. Y. .....March 17

Chemical Specialties Manufacturers Assn., Meeting of Board of Governors, Executive Boards, and Committees, Belleview-Biltmore Hotel, Belleair, Fla. .....March 21-23

National Packaging Exhibition, Convention Hall, Atlantic City, N. J., ...April 4-8

American Chemical Society, national meeting, Statler-Hilton, Sheraton-Cleveland Hotel, and Cleveland Auditorium.....April 5-14

Society of Cosmetic Chemists, New York Chapter, Hotel New Yorker, New York .....April 20

Interpack, International Packaging Fair, Exhibition Grounds, Dusseldorf, Germany .....April 20-27

American Society of Perfumers, 6th annual open symposium, Essex House, New York .....April 28

Toilet Goods Association, scientific section, spring meeting, Waldorf-Astoria Hotel, New York, May 11.

Chemical Specialties Manufacturers Assn., 48th mid-year meeting, The Drake Hotel, Chicago Ill..... .....May 16-18

Packaging Institute, Seminar on Aerosol Packaging, New York..June 1

Chemical Specialties Mfrs. Assn., first annual golf outing, Knollwood Country Club, White Plains, New York.....June 16

Toilet Goods Association, annual convention, Poland Spring House, Poland Spring, Me..... .....June 27-30

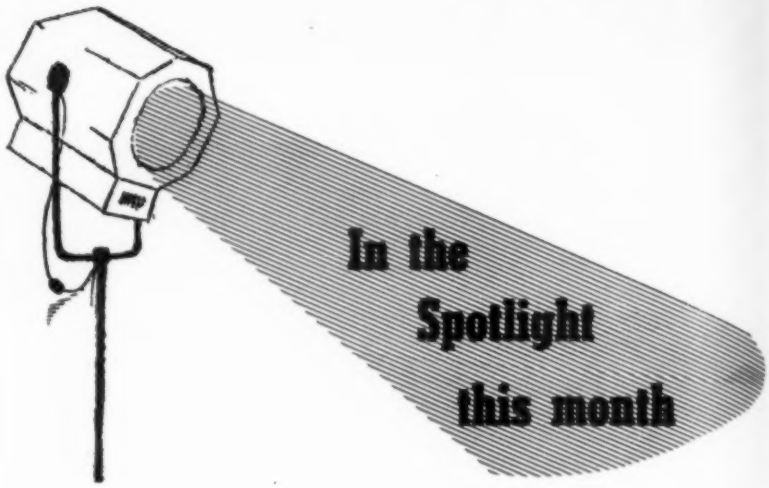
Chemical Exposition U.S.A., 1960, Statler-Hilton Hotel, New York City .....Sept. 3-15

Society of Cosmetic Chemists, annual seminar, The Drake Hotel, Chicago. .....Sept. 15-16

French Packaging Institute, First International Packaging Machinery Show, Paris, France.....Oct. 14-23

Toilet Goods Association, scientific section, fall meeting, Waldorf Astoria Hotel.....Nov. 30

Chemical Specialties Manufacturers Assn. 47th annual meeting, Hollywood Beach Hotel, Hollywood, Fla. .....Dec. 3-9



- **First Aluminum Containers Produced in Canada** . . . An important event in the history of Canadian aerosol development, debut of the first aluminum aerosol container, is covered fully in this illustrated article beginning on page 20.

- **Aerosol Movie Device** . . . Further specifics on the operation and critical reaction to "AromaRama," first attempt at expelling odors to coincide with scenes in a motion picture, are given in an **Aerosol Age** exclusive on page 27.

- **Technical Fire and Safety Considerations** . . . Just how aware is the aerosol industry of its fire and safety responsibilities with a wide range of products, many of them highly flammable? Pete Clapp, vice-president of Western Filling, gives his views on this question on page 33.

- **Spray Can Handle** . . . In an article beginning on page 37, a discussion is offered on the pros and cons of using a special handle to relieve user fatigue for a variety of common household products.

- **Propellant Cartridge for Perfumes** . . . In an interview on page 23, **Aerosol Age** discovers that non-aerosol holdouts are showing keen interest in an aerosol-related device which employs a propellant cartridge separate from the perfume.

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Newman-Green's exclusive spray head design produces a uniform spray pattern that is finely atomized and evenly dispersed. The unique two-tone spray head assures quick, positive identification of the orifice opening. Direction of the spray pattern is always immediately apparent.

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The built-in quality of Newman-Green valves attest to the thorough inspections and control methods, necessary to providing the pressurized packaging industry with the best valve obtainable. Its dependable operation sparks consumer acceptance and that's what counts! Call your nearest Newman-Green representative today for pertinent help in solving any of your aerosol packaging problems.

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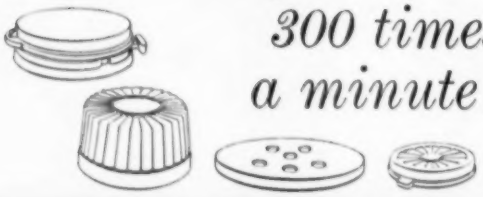

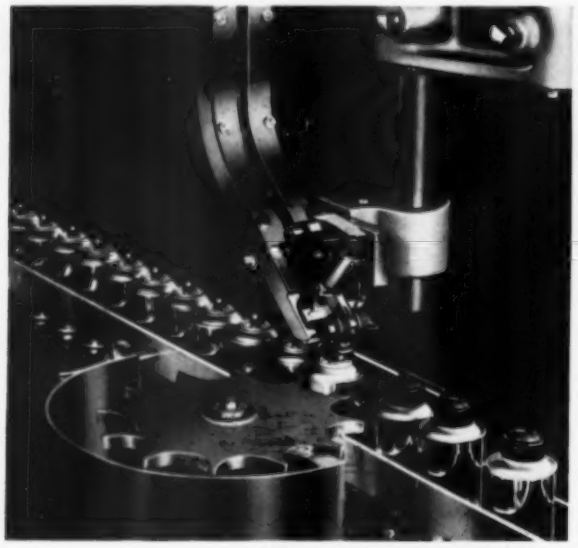

Closeup view of new Sorter Chute and Chute Escapement on H-O-F Capper. It rolls snap-on caps (up to 300 a minute) with perfect fit.

Now you can average up to 300 perfectly snug metal or plastic closures a minute with the Consolidated H-O-F Capper. That means extra profits—quickly!

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- OIL BOUQUET H.D. no. 3128
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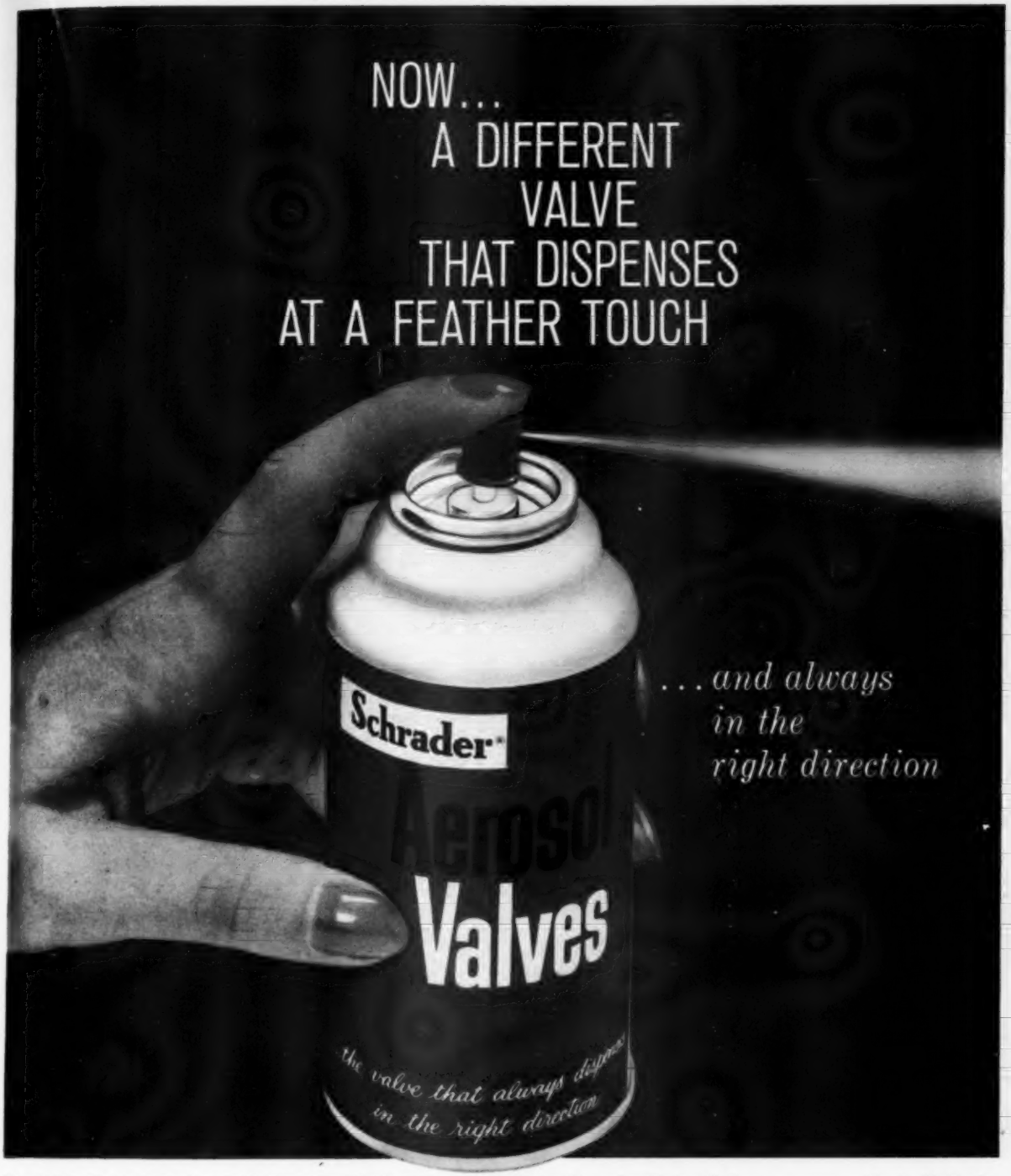

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#301
For all "211" fabricated cans

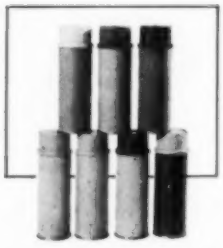
#100
For 6 oz. "202" Crown extruded cans

#201
Grips outside rim of all "202" fabricated cans; with positive snap fit for all valve styles

#200
For all "202" fabricated cans; cap grips valve cup

#400
For all 1" valve cups

As a pioneer in plastic packaging, Gilbert Plastics has always concentrated on creating new products to meet the most advanced demands of the packaging industry. Gilbert was **first** with the unbreakable plastic stack cap . . . **first** with a complete range of plastic caps for every standard can . . . and Gilbert will continue to be **first** in plastic caps no matter what the future form of aerosol packaging. Write today for complete information, samples and prices.



Some sales territories still available to qualified representatives.

GILBERT PLASTICS, INC.

11 Boright Avenue • Kenilworth
New Jersey • BRidge 2-6400

Canadian distributor: Twinpak, Ltd., 6525 Somerled Ave., Montreal, Quebec, Canada • British affiliate: I-TO-I PLASTICS, Bridge Close, Romford, Essex, England

EDITORIALS

The Gun Points At Advertising

WITHIN the past three months, the advertising industry has sustained severe buffeting by Congressional committees, the Federal Trade Commission, and other governmental bodies. Two leading aerosol marketers, Revlon and Colgate,—in headlines all over the country—have been accused of either involvement in the television quiz scandals (Revlon) or of misleading advertising of its products (Colgate). Despite much backing and filling by advertising executives, plus some half-hearted attempts to justify this type of advertising, the opinion left with a large segment of the public seems to be that all advertising is suspect, and at best advertising claims should be looked upon with a jaundiced eye.

If this crackdown on advertising practices alone were able to capture the major share of headline space, it might not be too significant. But advertising must share the news pages with charges of the use of carcinogens in lipsticks, with considerable agitation swirling about the Food Additives Amendment, with Senate Committee hearings indicating that drug companies are making excessive profits from their retail drugs, and even charges of price fixing by drug companies in violation of the Antitrust Act. Reliable reports indicate a favorable consumer reaction to all these exposures (Aerosols in Review, page 48), so favorable in fact that people who study such things believe they see the beginnings of a consumer revolt!

Whether or not all this does in fact, indicate any kind of consumer revolt would be tough to argue conclusively at this early date. But the fact that such an observation validly can be made should be cause for real concern in the aerosol industry.

In fact, marketers of aerosol products would do well to reexamine their advertising claims, for exaggeration or outright falsehood; their product formulations, for safety of ingredients; and their marketing or distribution practices, for inequities in price allowances. Preventive measures would be advisable to ward off any direct attacks on aerosol advertising or on the ingredients of aerosol products. For now it seems likely that this widespread crackdown will get worse before it loses any momentum.

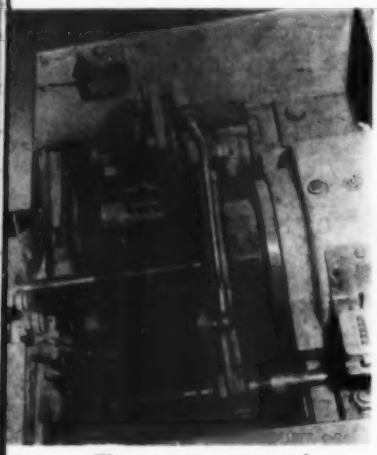
Aerosol Publicity Program

Every year at this time the Publicity Committee of the CSMA's Aerosol Division begins a drive to collect funds for its continuing aerosol publicity and product promotion campaign. With a modest expenditure of $25,000 per year over the past three years, the program has succeeded in spreading the word about aerosols to the consumer press, to television, and to the influential retailing press. Major feature articles extolling the benefits of using aerosols have appeared in leading consumer magazines, and many more are in preparation. Newspapers in out-of-the-way places all over the country have been printing stories and photographs of smiling women using aerosol products.

All this has been accomplished with an expenditure, actually an infinitesimal fraction of the half-billion-dollar aerosol market, gathered on a subscription basis from the member companies of the CSMA. This program deserves the wholehearted support of every CSMA member with a vested interest in aerosol packaging, whether he be supplier, marketer, or in some less easily definable category with only a fringe interest in pressurized packaging.

An aerosol publicity program is particularly significant this year because of all the adverse publicity suffered by aerosol advertisers, marketers of pharmaceuticals, and marketers of food products. And when one considers the fact that publicity is still the *forgotten* business activity in the aerosol industry (with the exception of good efforts by the propellant, valve and can suppliers, and by one or two fillers) this program can be seen in the light of its being essential in gaining increased consumer acceptance for the aerosol.★

First Aluminum Aerosol Container In



The extrusion press punches out the basic container shape.

Trimming and cleaning is done on this automatic unit.

Can aperture is rolled and shoulder is formed on container.

INSTALLATION of the first impact extruder in Canada late last year spearheaded the introduction of aluminum aerosol containers in that country. Modern Containers of Toronto, in business since 1916, has already produced over one million aluminum aerosol containers through use of the new extruder. According to Charles Hill, vice-president and director of the company, "We have only just touched the edge of the market for this product."

Aluminum aerosol containers are competing on a straight price basis in Canada. Modern Containers' interest in the product actually dates back two years to the company's first experimental runs. The first aluminum containers in Canada were the purse-size type, providing handbag portability for perfumes, distributed by Modern to show Canadian packagers what could be done with the impact extruded aluminum product. At the same time, work was proceeding on the production of a 2¼-ounce unit, which like its smaller brother, was the design of the Peerless Tube Co. of New Jersey. The 2¼-ounce container eventually proved to be the first aluminum aerosol marketed commercially in Canada.

The Rexall Drug Co., Ltd., Toronto, was the first company to order a production run of aluminum aerosol containers in Canada. Rexall's requirement was a Canadian "first" of some significance, and called for cans 1⅜ inches diameter and 3¾ inches tall, lithographed for five different products. The historic quintet of hair spray, foot spray, shaving cream, tooth paste, and insect repellent is shown in the accompaning picture. Valves were supplied by Precision Valve Co., Yonkers, N. Y., and custom filling was done by Connecticut Chemicals in Toronto.

Modern Containers' aluminum supplier, Aluminum Co. of Canada Ltd., gave support to the company in the form of technical service and assistance with data on such matters as corrosion, shelf-testing, etc. Alcan, through its association with the Aerosol Division of the Canadian Manufacturers of Chemical Specialties Association, and its international affiliates in every major market in the world, was able to act as a source of comparative marketing information.

Hot on the heels of the Rexall order, Modern Containers landed other orders from a variety of other customers and the cans now bear many well-known names in the cosmetic field. Products already going into aluminum aerosols for these companies include cologne and hair lacquers, some produced by butane. But the big bright future that Mr. Hill sees for his products is not confined to these lines. Real volume is expected to come when tooth paste and shaving cream are packed in the six-ounce aluminum cans. That is why Modern Containers is impatiently awaiting the delivery of a new press in the fall, which will be able to handle the larger can. This press, on order from Herlan in Germany, is said to be the latest word in equip-

Introduced in Canada

Aerosol containers are decorated on this equipment.

This line of five containers for Rexall are the first Canadian-made aluminum aerosols.

ment for aluminum work. Known as the "P-8" model, it will allow Modern Containers to diversify and expand its production into a number of new lines.

The aluminum aerosol container first came into its own in Europe, but it is rapidly taking hold in North America. When it is sold on a straight price basis, as with the Rexall order, aluminum needs to do no *more* than match the quality of its competition. It does, in fact, a spokesman for Modern Containers points out, offer important additional advantages of its own. Impact extruded aluminum aerosols are of seamless construction and in the small sizes offer a wider range of shape possibilities. The fact that aluminum is one-third the weight of steel, they assert, offers obvious economies in shipping and handling. The bright appearance of the metal has natural merchandising appeal which can be supplemented by color anodizing or a high lustre vacuum finish.

Supplying mass-consumption markets is not new to Modern Containers. Operating since 1916, the company at present supplies well over half the collapsible tubes sold from Canadian store shelves.

Modern Containers, occupying a new plant at the corner of Bichmount and Modern Avenue in Toronto's thriving North-East, is everything its name implies. The company operates twenty-two automatic, conveyorized lines which take the metal from slug stage, through extrusion, trimming, printing and coating. The four impact extrusion presses will soon be joined by a fifth, the "P-8" model to be installed this year.

In the Canadian container business, the name of Charles Hill has become synonymous with that of Modern Containers. Joining the company in 1946, he began his career managing the Ottawa plant, which was sold when the present site was bought in Toronto in 1952. His company is a member of the John Dale group of companies, whose president, W. E. H. Jones, of London, England, is also the chief executive of Modern in Toronto. As part of a rapidly expanding group of companies working in one of the most dynamic fields of the packaging industry, Mr. Hill sees a bright future ahead. Pioneering the aluminum aerosol container in Canada is an example of an aggressive business approach bringing new benefits to the Canadian packer and consumer.★

Charles Hill

Legislation on TV Advertising Urged by FCC, Others as Tumult in Press Continues

LEGISLATION which would authorize fines of up to $5,000 and imprisonment for one year for deception on radio and television programs was strongly urged last month by the Federal Communications Commission amid growing indications of an even tougher government stand on all phases of television advertising. The FCC proposal followed similar proposals by the House Special Subcommittee on Legislative Oversight and Attorney General William P. Rogers, both of whom advised that the FCC and the Federal Trade Commission *already* have ample authority to stamp out most of the deceptive and corrupt practices uncovered by Congressional investigations.

The suggested new legislation is aimed at networks, advertisers, producers, sponsors, station employees, and other categories over which the commission contends it has no jurisdiction. The specific FCC proposals were similar to bills introduced in the House of Representatives by Rep. John B. Bennett (R., Mich.).

Earlier in the month, Colgate-Palmolive Co., a leading aerosol marketer, whose toothpaste and aerosol shave cream advertising had been cited by FTC, replied that "false, misleading, and deceptive" advertising was being used by other marketers of toothpaste. Colgate contended that none of its own advertising "when read or viewed in its entirety" makes the challenged representations directly or by implications. On the other hand, the company charged:

"The claims of prophylactic or protective properties contained in the advertising and television commercials or (our) competitors for dentifrice products, upon information and belief, have not been and are not based upon, nor warranted by, clinical or laboratory tests; have been and are false, misleading, and deceptive; and have had and now have the capacity and tendency to mislead members of the public into the erroneous and mistaken belief that such claims were and are true, and into harmful dental hygiene practices and the purchase of competitive dentifrice products, of little, if any, qualities or action protective against tooth decay or the development of cavities in the teeth."

The FTC complaint against Colgate's toothpaste advertising alleged that its claims for "Gardol" unfairly diverted trade from competitors and substantially injured competition. Colgate denied this allegation, contending that its Gardol claims "have been and are to the benefit of the public and improved dental hygiene." A major portion of the company's defense to the charges lay in the fact that Colgate had repeatedly submitted advertising samples to the FTC, and that the Commission had expressed no objections over the period of at least a year. Since issuance of the FTC objection in November, Colgate has dropped the "protective shield" in its advertising, but in television advertising has kept in situations which are reminiscent of the previously objectionable situations, i.e., a boy with a bow and arrow about to shoot it at the announcer.

Denials were issued immediately by Lever Brothers Co. and Procter & Gamble Co., two of Colgate's chief toothpaste competitors. Lever Brothers, marketer of Stripe, Pepsodent, and Chlorodent, declared that "We do not believe that the statement in question relates to any advertising of the dentrifices made and sold by Lever Bros. We have always taken great care to make sure that the claims made in our advertising are accurate and have been substantiated by competent scientific tests or clinical evidence. We have also been careful that nothing appears in our advertising which might mislead the public nor which could tend to encourage the public toward anything but good dental hygiene and practice."

Procter & Gamble, marketer of Crest and Gleem, called the Colgate statement a "curious shotgun kind of statement." A spokesman for the company, quoted in *The Wall Street Journal*, said that Procter & Gamble's "Claims are fully supportable and proof of these claims is available to any Government agency that has reason to review them . . . We are quite sure the Colgate statement does not refer to any P & G product."

The American Dental Association, which has long been an attacker of advertising claims used for toothpaste, appeared to be delighted by the crack-down, which it attributed partly to "an aroused public." In a special information bulletin, the ADA told its 94,000 members that "it is safe to assume that more dentrifice firms and their advertising agencies will continue to take a long and careful look at their advertisements."

As if Colgate didn't have enough troubles with its two FTC complaints, one against Gardol and the other against use of sandpaper to advertise its aerosol shave cream, Ted Bates & Co., its agency stepped into the picture to further stir up the situation. In a full-page advertisement in *The New York Times, The New York Herald Tribune, the Wall Street Journal, The Chicago Tribune, the Washington Post,* and *The Washington Star,* the agency took FTC Chairman Earl W. Kintner to task for accusing companies of deceptive and dishonest advertising. In an analysis of the results of the advertisement, which was addressed directly to Mr. Kintner, *The New York Times* termed it "About as big a blow to the agency

(*Continued on Page* 70)

Propellant Cartridge Device Reported Gaining Acceptance for Non-Aerosol Perfumes

THOSE non-aerosol holdouts among prestige-conscious perfume marketers may soon give in to packaging their perfumes in aerosol-related devices which employ a *separate* propellant cartridge. This would sidestep the somewhat touchy area — with perfume marketers — of having to alter the basic structure of their secret, highly valued perfume formulations.

This fact was revealed by Marcel Franck, distinguished president of Ets. Marcel Franck, the French Atomizer Co., (U. S. subsidiary), and a number of smaller companies interested in the field, in an interview with *Aerosol Age*. Ets. Marcel Franck, a leading producer of conventional atomizers, a custom filler, and now a manufacturer of aerosol valves, recently developed a cartridge-type dispenser aimed specifically at the non-aerosol perfume marketer. In this somewhat expensive device, first introduced in a U. S. package by Parfums Marcy, Inc., New York, a glass cartridge of propellant 12, attached under the valve housing, "bleeds off" the perfume through a dip tube. Since it is designed so there can be no direct physical contact between propellant and perfume (except at the instant it atomizes the perfume into a mist) the perfume does not have to be altered to provide for long-term compatibility with the fluorinated hydrocarbon propellant (as it usually does for the regular aerosol container).

With an obvious eye toward the luxury rather than the mass market, M. Franck's firm has spared little to give the device a high degree of performance and an appearance to rank with the cost of the perfume. For instance, the entire mounting on the Marcy package is gold-plated, and the interior gasketing is of high-grade natural rubber. Each valve produced at his Paris plant is tested repeatedly before being installed in the gold-plated mounting. Filling of the propellant cartridges, done on Marcel Franck's aerosol line in Paris, provides that each cartridge be run through a hot water bath (60°C.) to test for leakers and other imperfections. The glass cartridges, supplied by Saint Gobain, leading French producer, are each examined through a polaroscope to catch minor, and even microscopic bubbles, or other imperfections.

The Marcy "Replique" package, showing a detail of the propellant cartridges. It retails for $50 plus tax.

As is hinted above, the gold plating and all the added quality control features put the unit beyond the realm of the mass consumer-marketed product. Marcy's "Replique," for instance, retails at $50 plus tax for just three ounces of perfume (plus two extra propellant cartridges). Marcy's "Plaisir" in the same size container sells for $60: In France the dispenser unit, with cartridges, costs the perfume marketer about 6,900 francs (approximately $17).

M. Franck acknowledges that the price is the principal limiting factor working against the possibility of the dispenser "filtering down" to use by marketers of perfumes not in the luxury class. His company plans a cheaper version, in plastic rather than gold-plated metal, which could compete with conventional dispensers and possibly even more expensively packaged aerosols. Such a unit has already been perfected by Franck's

(*Continued on Page* 76)

England

After experiencing a record year of something close to 25 million units in 1959, the English aerosol industry is looking forward to an expansion to about 35 million units, or an increase of 30%, for 1960. Component manufacturers (valves, cans, propellants) appear to be in general agreement on this estimate. However, some of the more optimistic among the suppliers are setting their sights even higher.

Consumer prices in Britain are

Notes From Europe: European Industry Completes Best Year of Production

down—very much so, in fact—and competition is keen. Some British aerosol executives believe this may indicate a "weeding-out" period, such as occurs with all infant industries. Everyone hopes this assumption is so, since if quality should be sacrificed for price, the result could be disastrous.

Last year British propellant producers revised their price schedules, but the advantages mostly went to large tonnage users, namely, the contract loaders. In larger quantities, propellant prices are comparable with those in the U.S., but the smaller loaders are put under perhaps unfair economic pressures. With the market expanding and number of smaller loading stations on the increase, U.S. propellant producers who have been canvassing the Continental European market might do well to take a second look at England. Indeed, the opportunities for supplying the Outer Seven from England may be even better than those in the Inner Six.

After a slow start, Britain seems now to have taken the lead in containers, particularly those of tinplate. However, owing to a relatively high price differential, England's aluminum cans are not enjoying such wide use as such containers are on the Continent. This may be more properly attributed to the relatively lower price of tinplate cans rather than to a high price of aluminum containers. At three pence per unit for six-ounce tinplate containers, finished, with an attractive lithographed body (six cents U.S.), they are even lower in cost than corresponding containers from U.S. companies.

British container manufacturers are already exporting in volume and, should higher can and tinplate prices result from a new round of steel price increases in the U.S., they will seek an even larger share of the overseas market. Indeed, so far as we have seen, the alert young management of Metal Box seems to set the pace for the entire European aerosol container field, not only for tinplate, but for aluminum. On Baker Street in the center of London, Metal Box operates its own self-service retail store, where it merchandises its customers' products for market analysis and research purposes. U.S. and Continental producers who go in heavily for consultants could well take a leaf from this book. Incidentally, Metal Box is also the British licensee for Precision Valve, but purchasers can buy their cans with or without valves, whichever they prefer.

As to valves, England currently has three major types, with a fourth in the offing. Precision, which leads by far in volume, is more than holding its own. A subsidiary of Midland Aerosols has put out Aerosol Research "K-38" types and has also put on the market something closely resembling the VCA valve, both advertised as "quick gassers."

For the somewhat slower pressure filling machines manufactured locally in England these designations *do* have commercial significance for very small runs. SAFCA also has a domestic-made valve, but it is used principally for paints, lacquers, and viscous products where controlled discharge rates are not too crucial. Aerosol Research has a new English licensee which will shortly bring out the "K-74" and other advanced types, but little is known as to production facilities and when these valves will actually be on the market.

Probably the most impressive aspect of the British aerosol picture is that the heretofore dominant contract loader position seems to be breaking down. More and more of the larger companies are seriously considering private loading and many more have reached the point of merely flirting with the idea.

When an individual company's requirements reach close to one million per year and the contract loader demands lengthy advance scheduling (sometimes with no possibility of being able to take care of peak demand oversights), the marketer tends seriously to consider filling his own requirements under his own roof.

In the container field, a new extruded aluminum can with sloping sides (greater diameter at the base than at the shoulder) has been intro-

duced. For this type packagers are going in widely for an aluminum protective stacking cap the full diameter of the new container. A new Metal Box eight-ounce container, with the same diameter as the six-ounce unit, also has very attractive proportions, particularly with the large over-cap.

All in all, the aerosol picture in Britain is most impressive. Consumer prices are down—possibly too low for the good of the industry—but competition is keen and there seems to be optimism everywhere.

By Dr. Tom C. Clark
Druk-Pak Ltd., Zurich, Switzerland
Aerosol Age European Correspondent

Germany

In 1959 Germany had about the same production increase as Britain and also produced about the same number of units—25 to 27 million. German aerosol experts look for something close to 35 million units this year. In range and variety of product quality they are at the top. Many new products are being shelf-tested with typical German thoroughness and will eventually hit the market. Private loading continues to increase, but the old established loaders have also expanded their production facilities.

In April, Germany will play host to annual meetings of the European aerosol trade associations at the Interpack Fair at Dusseldorf (April 20-27). Held only bi-annually, this fair is the largest packaging exposition in the world. Practically all European aerosol component suppliers—propellant manufacturers, equipment suppliers, can and valve makers—will be exhibiting and demonstrating their wares. U.S. aerosol men planning a European trip this Spring should note the date on their calendars and begin making advance hotel reservations.

France

French aerosol production is enigmatically difficult to estimate, especially since the one-litre can (equal to about six of the six-ounce cans) is becoming more widely used. However, industry sources seem agreed that 1959 production was somewhere in the vicinity of 13 million units, with 1960 looked to as the year for the real up-swing. With a liberalization of import permits, loading facilities are being expanded and many new stations will be in operation by mid-year.

In the view of this observer, France appears to need a good pressure-filled metering valve for her perfume products, all of which are fully developed and market-ready according to strict French standards. Many attractive containers are available, but the small replaceable glass bottles, which fit into the lacquered and embossed cover caps, must be all cold filled. In France, as in the case in most of Europe, pressure filling predominates by about a nine-to-one ratio.

Italy

After being a leader in European aerosol development for many years, Italy's aerosol production seems to have reached a temporary plateau of about 15 to 17 million units. In 1960, a slight increase of from 10 to 15% is anticipated. but no expansion plans, such as exist in the other countries mentioned above, are currently being laid out. Insecticides are still the leading product type, with sun tan next.

Switzerland

With its population of about five million, one of Europe's smallest, Switzerland has perhaps the largest per capita number of fillers in the world. By actual count, there are at least 30 stations and there may even be a few others in some Alpine valleys or abandoned tunnels which have not as yet been heard from. Aerosol Service, in Riehnen, near Basel, is the largest and by itself has a production capacity adequate to take care of the country's entire annual requirement (something close to 2.5 million units.) Aerosol Service is a pioneer in the European aerosol scene and its director, Mr. Hirschburger, one of the leading figures in the European industry.

What has produced and continues to support this unique situation in Switzerland, one which exists probably nowhere else in the world?

Aerosol production in both Britain and Germany is well over one-half can per capita per year. France and Italy lag, but will soon approach or even exceed that figure. U.S. production, including all pressurized packages, is something close to three cans per capita per year. Switzerland, one of the first countries in Europe with an aerosol industry and with no problems with war-ravaged industry, originally presented an ideal potential market with relatively high purchasing power. But it quickly reached a plateau of less than one-half unit per capita and has remained there. Why?

This unfortunate situation is attributed — and let economists take note — as having its principal origin in the fact that consumer prices are too rigidly controlled by merchant organizations. In other words, "cartels" of a sort exist at the retail market level.

Druggists and small retail shops usually belong to associations (called "Verbande"), from which they buy their wares at fixed prices and by which they are required to sell at similarly fixed consumer prices. For violations they are expelled from the "Verbande," and their overall source of supply is shut off.

This situation has been thrown slightly off balance by competition, which has led a small group of retailers, for example, to set up their own aerosol filling stations to produce their own products, independently of central buying source. These products, labeled with a natural designation without manufacturer identification, are sold at a few pennies under

Estimated Aerosol Production in Europe by Country

Country:	*Range:*	
Austria	500,000 –	600,000 units
Belgium	2,800,000 –	3,000,000 "
Denmark	800,000 –	1,000,000 "
England	24,000,000 –	25,400,000 "
Finland	1,200,000 –	1,400,000 "
France	12,000,000 –	13,500,000 "
Germany	25,000,000 –	27,000,000 "
Holland	4,200,000 –	4,500,000 "
Italy	15,000,000 –	17,000,000 "
Norway	1,000,000 –	1,200,000 "
Portugal	300,000 –	400,000 "
Sweden	2,800,000 –	3,000,000 "
Switzerland	2,300,000 –	2,500,000 "
Spain	400,000 –	500,000 "
	92,300,000 –	101,000,000 units

the controlled price, without fear of supplier boycott.

One group in Switzerland, the Migros organization, has long had success in its fight against the medieval Swiss method of merchandising. Starting some years ago from a traveling salesman's wagon, it now boasts over 320 retail store outlets and almost an equal number of fully-equipped sales wagons which tour the small towns and hard-to-reach valleys. About five years ago, Migros tried some aerosols, but was forced to withdraw the products because of leakers and clogged valves (both common occurrences during the early development of aerosols in Europe). Last year, the group came out with a six-ounce sun tan oil in pressurized form at a price (2.75 Swiss francs or about 64 cents), which is about half the price of other such products on the Swiss market. Migros' success in the field could be enormous and it's conceivable that they could break the backs of the other 30 Swiss fillers with a complete range of products. The retail outlets are theirs and the market exists.

Scandinavia

Steady production gains are noted in all the Scandinavian countries: Denmark, Sweden, Finland, and Norway, with perhaps Sweden and Finland leading. For some time Norwegian production was dominated by only one filler, but then an enterprising, energetic new company A/S Noosol of Oslo, entered the field with such success that this year they will probably expand their production facilities. In Sweden, A/B Aerosol Packing, Stockholm, has pushed ahead and even in the winter has to work overtime to keep up with orders (sun tans for skiers). Dr. Loewenberg, head of A/B Aerosol Packing, is one of Europe's aerosol pioneers and has contributed materially to the industry's success.

The Mediterranean Area

Italy, the most important aerosol country in the Mediterranean is discussed above, but all the other countries in this area are finding their way into pressure packaging. Israel is particularly active, with one small filling station established last year and another larger one ready to begin production about now. The latter company, Sypholux, of Tel-Aviv, has a complete line of market-tested formulations and could well dominate Israeli domestic and export markets for some years to come.

Spain is a surprise, with about half a million units estimated for 1959 and a growing market forecast for 1960. One limiting factor is high consumer prices, the result of imported components (even down to tiny unassembled valve parts) which must be sent over mountain passes or through convenient border crossing points without bureaucratic detection. Propellant quality has improved, and containers are becoming readily available, but mass consumer aerosols are still relatively unknown in Spain.

In Greece, some well thought-out plans should materialize this year. In Egypt, development is relatively stagnant despite the existence of at least one fully-equipped filling station. If this Egyptian facility doesn't go into operation soon, Egypt, Morocco and the other Arab countries could be the target for products filled by a new station in Tangiers. Algeria and Tunisia have so far been supplied from France, but if the market develops substantially, these countries will most likely have their own loading stations. There is only minor aerosol interest in Turkey, Lebanon, Iran, and Iraq but there could be excellent markets in these countries someday.

Although not really under the general Mediterranean grouping, India and Pakistan should be mentioned. Both look to Europe rather than Australia and Japan for guidance, facilities, and components; and there are indications of an ever growing interest. To date there are no filling stations in either country (every pressurized package being imported) but the per capita consumption potential is highly appealing. There still may be a remembrance of U.S. war surplus insecticides which found their way onto the Indian market. It is not unreasonable to look for an easement of the component problem within the next two years, which could herald the beginnings of a sizable aerosol industry in these countries.

In summary, an estimate of 1959 European aerosol production by countries is ventured, as in other years. As with previous years, the reader should be cautioned that there are *estimates*, and that some may be too low and some slightly high. Consultations with propellant, valve, and container suppliers provide the basis for the calculations listed in the accompanying table.

To offset further chance of error in these estimates, it is hoped that the Dusseldorf aerosol meetings will formulate a program requiring a statistical submission of production figures by both product classification

(*Continued on Page* 76)

"AromaRama" . . .

Aerosol Movie Device

- ✓ how it works
- ✓ who developed it
- ✓ more critical reaction

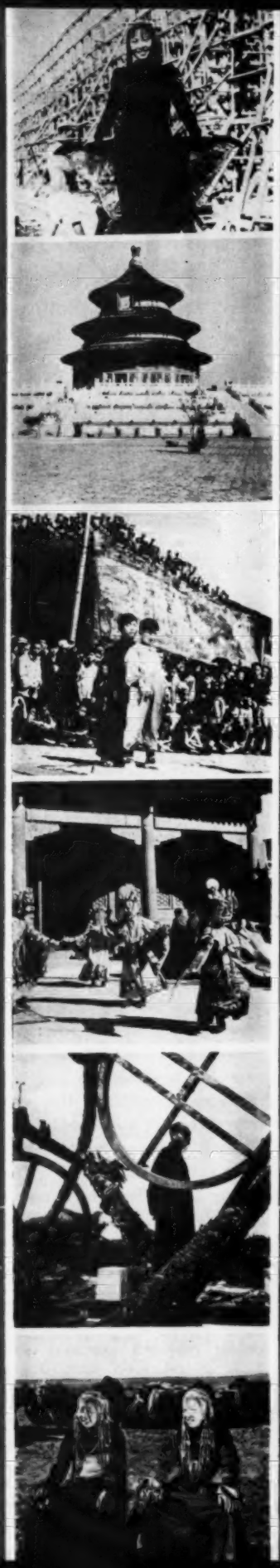
JUST before Christmas, an unusual motion picture premiered in New York City. Called *Behind the Great Wall,* it was produced by Continental Distributing, Inc., in a process called "AromaRama." As specific scenes are shown in the picture, scents are generated to coincide exactly with the scene in the film, thus giving the viewer an additional sense not ordinarily available to the movie goer.

This picture is of particular interest to the aerosol industry because it employs an aerosol device to project the odors. The process has three major components, a triggering and timing device, specially developed scents, and an electronic purifier. The pressurized scent containers are designed so they release their fragrances with predetermined intensity by automatic cue, and the scent is carried rapidly and simultaneously to all sections of the theater by an air distribution system. The electronic air purifier clears the air after each aroma injection.

The scents were developed by Rhodia, Inc., American affiliate of Rhone-Poulenc. "Freon" aerosol propellant is the fast-evaporating base. The triggering and timing mechanism was developed by the Camera Equipment Co. and the Industrial Timer Corp. A special "scent track," attached to the film in a manner similar to the sound track, transmits impulses to a battery of pressurized scents which propels the aromas throughout the theater by means of the air conditioning vents.

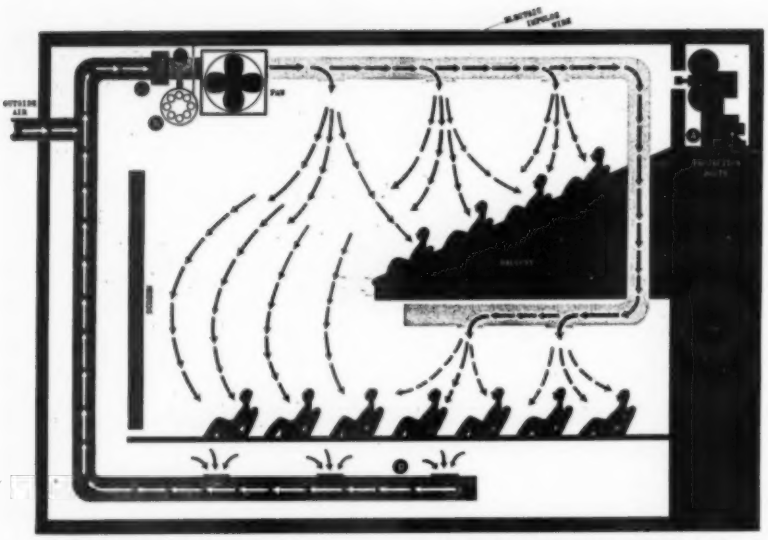
As will be seen by the diagram accompanying this article, the pressurized scents are discharged into the air system from a circular dispensing "wheel," each station of which contains a separate odor. Each cartridge in turn is swung into place, actuated for a prescribed amount of time, and then removed automatically. Once installed, the device requires no other attention than replacement of the aerosol cartridges after 21 performances of the film.

The different scents cover a wide range for the picture: orange, incense, streets of Hong Kong, honky tonk odors, harbors and docks, fishing with cormorants, cordite, meadow land, equestrian, torch, tiger, oriental evergreen, child's funeral (burn paper and wood), rustic barnyard, tea, floral, joss sticks, construction (fresh cut lumber and fresh dug earth), Chinese banquet, sour wine, almond cake, storm (light scent of ozone and intensification of wetness), flood (moss, dead grass, and mold), earth odor, the river, floral procession, and fireworks. According to Jacques



In the January issue of *Aerosol Age,* there appeared a brief story reporting on critical reaction to the new "AromaRama" motion picture called "Behind the Great Wall". The details of the process, which employs an aerosol-type dispensing mechanism, were somewhat vague in the original account, and both reviews (from "Time" magazine and "The New York Times") were, to say the least, unfavorable. In order to correct any mistaken impressions on the part of the readers about either the process or the general critical reaction to the picture, this second story is published.

— THE EDITOR.



THE AROMARAMA SYSTEM...Film has extra track which issues cues to console unit (A). When received, electrical impulse is sent to turntable (B). Proper odor can is rotated and discharged into air stream (C). Odor is disseminated simultaneously throughout entire auditorium and is then removed through intake ducts (D) to pass through electronic air purifier (E). Air in theatre now cleansed for new odor to be discharged on cue.

P. Leroux, sales manager of Rhodia, the toughest of these was exploding firecrackers and flowing water. "Over 2,000 standard chemical odors were mixed in various combinations to arrive at all these aromas, but each of the basic scents for this film called for odors with which we had never dealt before."

One major problem in the development of "AromaRama" was how to get rid of one scent when it was time to propel another. In fact, previous attempts at such devices made in the 1930's (through conventional air conditioning systems of theaters), very often resulted in a curious and even bewildering mixture of scents as one odor was introduced on top of the preceding one. In "AromaRama," the cues for new odors come in very rapid succession, and the preceding fragrances are eliminated by an air purification system which employs an electronic precipitator introduced among the baffles and filters of the theater's air control system, This odor evacuation device was a development of the American Statronic Corp.

The entire "AromaRama" process is the brainchild of Charles Weiss, a public relations executive who has handled a number of entertainment accounts. Some years ago he came up with the idea of adding aromas to the film track as an innovation radical enough to woo away the public from their television sets.

Working with his own consultant, he discovered that the problem could be broken down into three principal categories: scents, timing, and air purification. Taking the problems in order, he first consulted with the technical staff of Rhodia. Then he approached The Statronic Co., a firm which has a reputation in the air filtering industry. And finally, he approached Camera Equipment Co. and the Industrial Timer Corp., both also well known in their respective fields, for development of a simple mechanism which could be connected to a 35 mm. projector to trigger the aroma.

Despite a good deal of enthusiasm from all four of these firms, a total of more than 11 years of collective research effort was necessary to find solutions to the various problems. Rhodia spent three years; Camera Equipment and Industrial Timer one each, and Statronic spent six years in developing its special air filter, which was considered the crux of the problem of making the system practical.

Mr. Weiss's experience, since he came out of the Air Force in 1945, has been varied. He quit studies at the Law School of the University of Miami to study theater direction under Lee Stasberg. Later, he ran a summer theater in upstate New York and quit that to enter the public relations field in 1949. During the ensuing years, he handled financial, corporate, and entertainment publicity for such diversified interests as Seagram's and television producer Fred Coe.

The problem of script and adaptation also presented special problems. Sidney Kaufman (formerly with MGM and Gabriel Pascal) and Tom Orchard (a writer, director and producer for the "March of Time" and for Louis de Rochemont Associates) worked out the theory of relating words and images to scents. They had to estimate audience aptitude for identifying unfamiliar odors, establishing what fragrances had to be omitted or revised, and finally, to judge the dramatic effect of each scene as a totality.

They used the technique employed by composers of film music, working with the film scene by scene, interpreting the total effect to be achieved, determining the specific scents to be used. Each scent, after being developed in Rhodia's laboratory and approved by the producers, had in turn to be run through the entire apparatus to be certain that it would behave properly in the theater.

The motion picture selected for adaptation to the new process, "Behind the Great Wall" had been previously recognized for its cinema art qualities. In 1958 (shown without special aroma effects) it won grand prizes at the Brussels Exposition for the "best film" and "best photog-

"BEHIND THE GREAT WALL" in AromaRama

An ASTRA CINEMATOGRAFICA-LEONARDO BONZI Production

Produced by	Leonardo Bonzi
Directed by	Carlo Lizzani
Text and Artistic Supervision by	Giancarlo Vigorelli
Photography	Pierludovico Pavoni
Story	Ennio De Concini
Production Manager	Marcello Bollero
2nd Unit Photography	Alessandro D'eva
Edited by	Mario Serandrei
Music by	A. Franceso Lavagnino

IN WIDESCREEN TOTALSCOPE

Four-track Magnetic Stereophonic Sound	Fox Movietone
Color by	DeLuxe

raphy." At the Venice Film Festival the same year it was the winner of the "Golden David" statue for best production. Shot in widescreen process, in color, it depicts scenes of contemporary life in China not seen in the U. S. since the Iron Curtain descended on that country.

WITH the exception of *New York Timesman* Bosley Crowther and Time magazine (*Aerosol Age*, Jan,. p. 29), both of whom blasted the process as a "stunt" without much artistic values, there were several reviewers who turned in favorable reports on the picture:

The *New York Herald Tribune* (Dec. 13), for instance, called it an "intriguing experience," which although in one sense might be called a 'gimmick,' indisputably intensifies the sense of reality." Expressing some reservations about whether or not the Occidental would be able to recognize some of the scents, the review concludes: "Whatever one's personal olfactory equipment, there could be no doubt to anyone able to breathe that the process was bringing the nose into the picture, and, despite the jokes that might tumble into mind at the idea of smell joined to the arsenal of cinematic devices, there is no question about its effectiveness in creating illusions of reality."

The influential *Film Daily*, trade paper of the motion picture business, was also highly complimentary. "The picture is a thorough delight to the senses. Much of it is brilliant and wonderful to behold . . . it proves a highly exciting experience from its opening sequence, in which narrator Chet Huntley squeezes a lushly colored orange and the pungent odor of the fruit sweeps across the theater."

The business of slicing the orange was mentioned as the high point of the picture's aromatic experience by Archer Winsten, *New York Post* reviewer, who calls this "a high point of conviction never again reached." Mr. Winsten expressed definite reservations about the whole idea in these words:

"For one who is on the alert for the smells, their identification and

(*Continued on Page* 70)

Packaging Show

is set for

Atlantic City's Convention Hall

DURING the first week of next month (April 4-7) an estimated 25,000 visitors are expected for the 29th National Packaging Exposition at the Convention Hall in Atlantic City, N. J. Though exhibits cover the entire range of the packaging spectrum, from packaging machinery to the smallest packaging component, aerosols are again expected to capture a large share of attention.

Altogether, nearly 400 companies will exhibit in a total area of more than 140,000 square feet, all which was sold out by early December.

At least three companies, Fluid Chemical, Kartridg-Pak, and Arthur Colton, have announced plans to have aerosol lines in operation. In past years Kartridg-Pak has usually had at least two lines on display, in addition to its usual laboratory equipment.

The General Chemical Division of Allied Chemical Corp., will once again have an aerosol packaging information center, but this year will also feature aerosol product demonstrations. Such demonstrations may also be a part of the booths of the major container suppliers.

Among the many aerosol exhibitors are:

Air Reduction Co.
Aluminum Co. of America
Armstrong Cork Co.
Bernardin Bottle Cap Co.
J. L. Clark Mfg. Co.
Continental Can Co.
Crown Cork & Seal Co.
The Dow Chemical Co.
Freon Division of DuPont
Emhart Mfg. Co.
Eriez Mfg. Co.
Ertel Engineering Corp.
Fluid Chemical Co.
Walter Frank Organization
General Chem. Div.,
Allied Chem. Corp.
Adolph Gottscho, Inc.
Gray Co., Inc.
Kartridg-Pak Co.
Labelette Co.
MRM Co.
Markem Machine Co.
Monroe-Danford & Co.
National Starch & Chem. Corp.
Owens-Illinois Glass Co.
Pfaudler Co.
Toledo Scale Corp.
U. S. Industrial Chemicals Co.
T. C. Wheaton Co.
S. S. White Dental Mfg. Co.

The exhibition will be open 10 A.M. to 6 on Monday and Wednesday, from 10 to 9 P.M. on Tuesday, and from 10 to 4 P.M. on Thursday.★

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A new concept in aerosols... QUICK-BREAKING FOAMS

Unique quick-breaking **aerosol foams are dispensed on a limited area . . . break into liquid when disturbed! Promise important advantages for many products, including:**

- **After-Shave Lotions**
- **Nail Polish Removers**
- **Hair Dressings**
- **Sun Screen Lotions**
- **Cold Wave Lotions**

In after-shave lotions and nail polish removers, for example, see how new Quick-Breaking Foams can be used to make application easier and more convenient . . .

Quick-breaking foam in the palm of the hand

. . . turns into liquid when applied to the face.

A dab of quick-breaking foam on the fingernail

. . . changes to liquid when touched with a cleansing tissue, and nail polish rubs off.

Out of intensive, continuing aerosol research in General Chemical's Technical Service Laboratories comes an important new development with dramatic potential for product improvement . . . *Quick-Breaking Aerosol Foams!*

These unique quick-breaking foams add new advantages, new product appeal that pays off in greater consumer acceptance. With this new principle you may overcome application deficiencies of many spray or stream-type aerosols; give them the extra touch of "magic" that bolsters sagging sales and builds repeat business.

Investigate this new research development *now.* As a first step, mail coupon for free information bulletin.

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Putting the "push" in America's finest aerosols

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Please send free "Genetron" Product Information Bulletin, "Quick-Breaking Aerosol Foam Products."

Name_____

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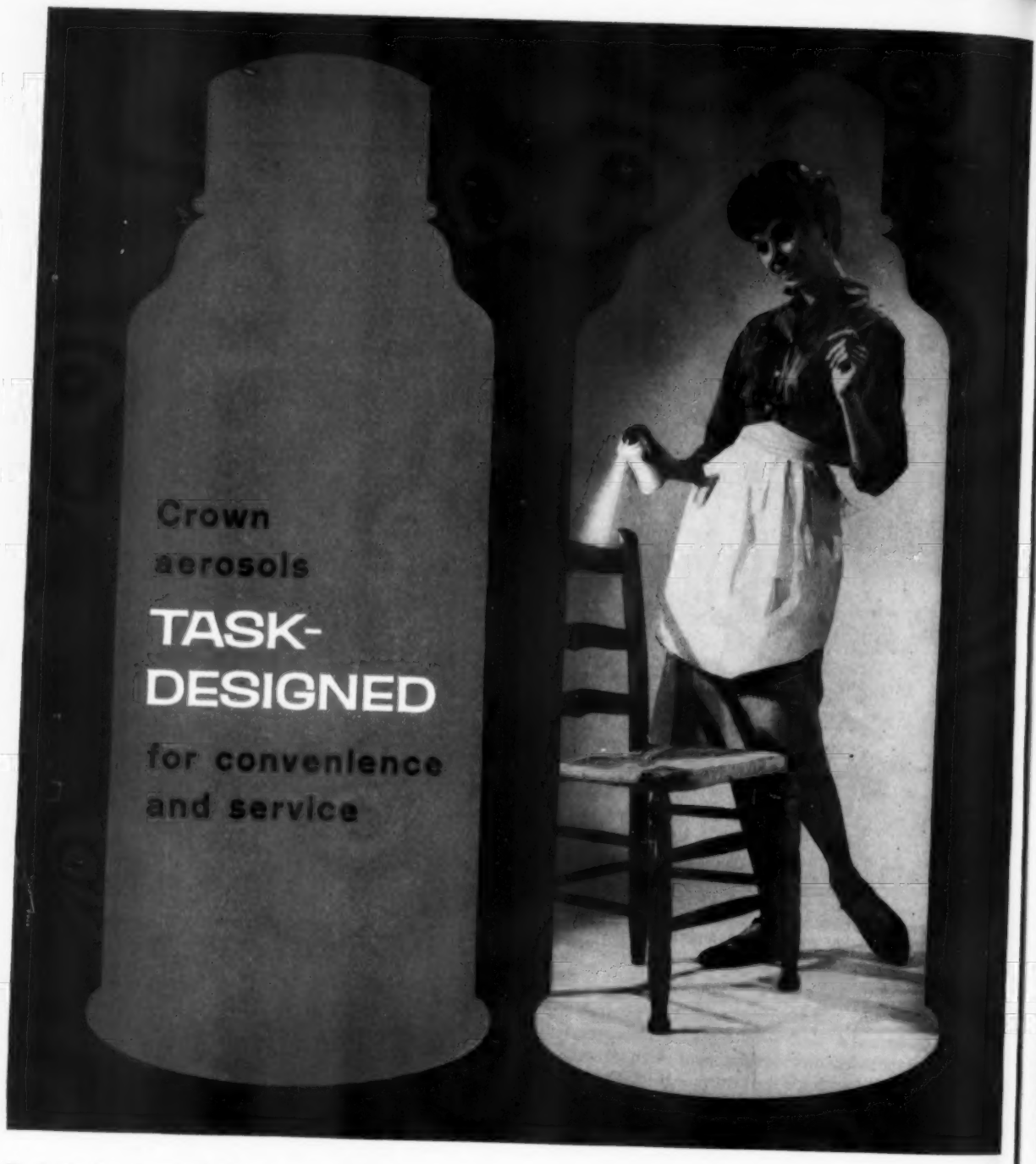
Company_____

Address_____

City_____ Zone____ State_____



Task-Designed aerosol cans by Crown—pioneer and leader in the aerosol field—help put new products on the market and add to the sales appeal of familiar products. Aerosol shellac packed in Crown aerosols, for example, is always handy, easy to use, and gives outstanding results.

Crown Cork & Seal Co. was the first to manufacture disposable aerosol cans. During the years since, our engineers have acquired vast experience in solving the problems of aerosol packaging. Crown aerosol facilities have been increased to speed service to you.

Crown aerosols are available in sizes from 6 to 16 ounces. May we send you more details?

CROWN

for cans · crowns · closures · machinery

CROWN CORK & SEAL CO., INC., 9300 Ashton Road, Philadelphia 36, Pa.

Technical Fire and Safety Considerations in THE AEROSOL INDUSTRY*

By C. P. Clapp*
vice-president
Western Filling Corporation
Los Angeles, Calif.

SAFETY is probably the most vital consideration of the aerosol industry.

"Aerosol" has become another word for "convenient," which the dictionary defines as "agreeable to the needs or purpose, favorable, easy or comfortable to use." For the enlightenment of those who read *Mad Magazine*, the aerosol industry does *not* have barrel-chested behemoths standing along the filling line blowing hot air into each can. Our technology hasn't yet progressed that far.

The basic principle, however, is nearly that simple, since every aerosol product is *self-pressurized* and releases its contents at the push of a button. This push-button contrivance separates the aerosol from other self-pressurized products, in which the contents may be removed through a triangular hole or by removing a cap.

The pressure in an aerosol package comes from a variety of gases—the fluorinated hydrocarbons and straight hydrocarbons being liquefied compressed gases, and carbon dioxide, nitrous oxide, nitrogen, and other gases (and even air) all falling into the category of non-liquefied compressed gases.

It is possible to completely control the spray pattern emitted from an aerosol by manipulating the valve and formulation. Sprays can be produced so highly atomized that they will remain suspended in the air for long periods of time. Space insecticides and room deodorants attribute their great effectiveness to a particle size of about 10 microns (smoke is usually one micron or below). It is possible to produce sprays having specific particle sizes to do specific jobs. For example, pharmaceutical sprays for inhalation therapy can be made to penetrate specific regions of the lungs; residual insecticides with particles over 50 microns are so formulated to prevent them from remaining airborne so that a wider range of toxic ingredients can be safely used. It is possible to produce a stream or squirt to treat animal eye infections at a distance, or just wet spray for a window cleaner to prevent the wind from blowing it away. A foam, heavy or light, stable or unstable, may be required, or we may just want the product to flow from an aerosol can as if it had been poured from an ordinary can or jar. Chocolate is one example of the latter type of product.

* From a paper presented to the Southern California Conference of Fire Prevention Inspectors in Los Angeles on Nov. 10.

WITH all these products the aerosol industry admits to having three areas of potential hazard: flammability; toxicity, and bursting due to pressure.

We'll discuss flammability first. Many of us have heard stories about things happening in fires that sound utterly impossible, such as a barrel of face powder actually burning. Probably no item exists which *cannot* be destroyed by heat or fire (and it doesn't necessarily take a nuclear reaction to do the job). The aerosol industry recognizes this is one area where an ounce of prevention can be worth tons of cure. Through the various subcommittees of the CSMA's Aerosol Scientific Committee, a number of practical flammability tests have been devised. Experts from the U. S. Dept. of Agriculture and the Bureau of Explosives of the Association of American Railroads (who compose our shipping regulations actively participated as advisory members in arriving at these tests, which later were included in the Interstate Commerce Commission regulations. These tests enable the aerosol industry to classify products for shipping and labeling purposes, and they are widely employed during product development to ascertain safety. All aerosols must undergo these tests.

1. *The flame projection test:* This is to take care of the eventuality of someone spraying a can near a lighted stove. The spray from the can is passed through the upper one-third of a flame from a plumber's candle. The plumber's candle is used as a standard flame source because it is

likely to be found in the usual places, and yields a fairly consistent flame temperature (about 1200°F.). From its source, the extension of the flame is measured in inches against a yardstick. A flame projection exceeding 18 inches from the flame source with the valve fully open, or any flashing back toward the valve at any egress or opening is considered a positive test. It is very important that this test be conducted in a draft-free area which can be ventilated after each test. There should be two operators, one to spray and one to record the results. Spraying time should be about 15 to 20 seconds, and the container should be at room temperature or about 70 to 80°F.

A demonstration of why special tests must be employed on aerosols is shown in the case of a container filled with 75% kerosene (with a flash point of 175°F.) and 25% propellant 12 (which is a fluorocarbon, nonflammable, and has no flash point). One might think such a blend should be regarded as quite safe and would yield a negative test. Actually it will show a *positive* flame extension.

This can also be demonstrated by another method. Take the case of a typical butane-propelled glass cleaner. This product is non-flammable because of water, but the hydrocarbon portion (flash point —75°F., lower explosive limit 1.6% by volume with air) exhibits extreme flammability seldom encountered with other chemicals. Yet this product, in a flame extension test, yields negative results!

If we invert the can and allow the straight hydrocarbon vapor to escape through the syphon tube and out the valve, it still produces negative results. True, the vapor can be ignited at two to three inches from the flame, but releasing the valve shuts off the fuel and stops the flame. Much the same result happens with a conventional space insecticide containing 15% kerosene, plus active ingredients and 85% propellants 11 and 12. But with a formula containing 50% isopropyl alcohol and 50% propellant there will be a definite flashback toward the valve. This emphasizes a major safety advantage of aerosols—the material inside the container cannot be ignited, as happens so often with conventional unhermetically sealed containers. The labeling requirement in Connecticut for an item yielding a positive test is "Warning (or Caution) do not use near fire or flame."

2. *The Open Drum Test* was devised to correspond to excessive spraying in an open area where open flame sources exist. In this test an open-head, 55-gallon drum is used. It is equipped with a hinged lid which will readily open at a pressure of five pounds, and has a viewing window in the side and at one end. Three circular openings one-inch in diameter are bored through the base about two-inches from the edge in such position, that when the drum is on its side, one hole will be at the top, one at the middle, and one at the bottom. Each hole must be equipped with a shutter which can be readily opened and closed.

A plumber's candle is lighted inside, and the spray is introduced through the upper half of the open end of the drum for a period of 60 seconds. Any propagation of the flame through the vapor air mixture constitutes a positive test. It is very important to maintain the drum temperature between 60 and 80°F. and again the test must be carried out in a draft-free area which can be ventilated after each test. Tests conducted with the same set of test products used in the first test reveal that, again, only the high isopropanol formula will yield positive results. Precautionary labeling here too should read "Warning (or Caution) do not use near heat or flame."

3. *The Closed Drum Test* was devised to account for a situation in which someone, while smoking a cigarette, might attempt to deodorize a group of kids in a telephone booth (or in any other small confined area where a flame source might exist). The same drum is again used, this time with the lid closed and with the candle burning inside. The spray is introduced, with the valve fully opened, through the top hole for 60 seconds. Any explosion sufficient to cause the door to move is considered a positive test, and the test is repeated twice more using middle and bottom holes in turn. Drum temperature must be between 60 and 80°F. and drum must be ventilated and allowed to cool after each test.

The closed drum test will always yield positive results on any product which yields a positive open drum test; and since the closed drum test is the more stringent, it is often possible to get positive results with this test after obtaining negative results with the open drum. The 75% kerosene formula yields a positive test in less than 60 seconds. And, though the butane-propelled glass cleaner will yield a negative test when sprayed into the drum in the regular manner, when the container with the hydrocarbon vapor is inverted and sprayed directly into the drum for 80 seconds, the results are *still negative*. Actually, there is only one-third of an ounce of butane in this can; and it takes about one pound to render inflammable or explosive about 400 cubic feet of air, assuming thorough mixing. The total hydrocarbon content in this can will therefore render about 8 cubic feet of air flammable and it will take a minimum of three or four minutes of spraying to get it out of the can—unless, of course, a hatchet is used. Eight cubic feet is a cube 2′ x 2′ x 2′, which is indeed small.

If the product yields negative results in the above tests, it is considered non-flammable for purposes of shipping. In the event there are positive results, the product is subjected to the modified tag open cup flash point test. Labeling is the same as for the open drum test.

4. *The Modified Tag Open Cup Test* was devised as the final classification of a flammable product (i.e., one that yields a positive flame projection, or open or closed drum test) for shipment in interstate commerce. The product in the can is chilled to a low temperature (about —20°F.) with dry ice or other suitable chilling me-

another extra base hit for SIMONIZ

with a VCA valve naturally!

TONE, the new aerosol furniture and appliance spray with long-lasting luster, adds an "extra-base" cleaning power to the Simoniz line. To assure maximum reliability and performance, Simoniz specified VCA valves and fitments.

That's why TONE features a VCA B-9 fast-gassing valve with nylon stem and a specially constructed mechanical breakup button with stainless steel insert. Because Simoniz, like countless other aerosol manufacturers, knows the value of having VCA components in their lineup.

VCA's engineering and research have significantly contributed to the development of many aerosols that are now regarded as standard products. Whether it is the creation of a totally new concept or the improvement of an already developed product, VCA has the experience to solve your problem.

Write or phone for samples and prices. VCA will be happy to have a representative call on you to discuss *your* product.

VCA INCORPORATED

CSMA

VALVE CORPORATION OF AMERICA, Inc.
1720 Fairfield Ave. • Bridgeport, Conn.

dium. The tag cup and its glycol immersion bath are also chilled to —20°. The container is then opened and the contents poured into the cup up to one-quarter inch from the top. Caution must be exercised here to insure that there is no pressure in the container before it is opened and to insure against frostbite. The liquid in the cup is heated, at a rate of 2°F. per minute, and a flame is passed across the top of the cup each minute. If a flash point is encountered below 20°F., the material is judged to be extremely flammable and must be shipped as a *flammable compressed gas*. Such products must be packaged in specification containers, or the packager must apply for a special shipping permit which may or may not be granted, depending on the relative safety as determined by the Bureau of Explosives. A severe fine and imprisonment, or both, are the penalties for violating the regulations for shipment of such highly flammable materials.

TESTIMONY of the fact that the aerosol industry has nothing to hide — from a safety standpoint — is the case of a diesel engine starting fluid which *has* to be flammable to function. The primary ingredient is diethyl ether, which, when introduced into the air intake of a diesel engine that is rotating, facilitates starting the engine. Straight ether is not used here because of excess combustion shock which could conceivably damage the engine, and hydrocarbon or liquefied petroleum gases aren't adequate because they don't contribute oxygen to the combustion process (as does ether) and hence are not nearly as efficient.

This pressurized starter fluid is shipped under a special ICC shipping permit with special packaging and labeling. The container itself bears a label reading "Warning, Extremely Flammable, etc." This product and others like it are certainly quite radical departures from normal aerosols, and are cited specifically to show that proper labeling, handling, and package engineering — contemplating end use first — can be effective. Several million such units have been produced and I have not heard of a single case of difficulty having to do with transportation or end use.

For precautionary labeling purposes, a somewhat different technique (than those just described) is employed for measuring. In this test the container is placed in an upright position and its top is pierced with a fine pointed instrument. In a few moments, after most of the gas has escaped, the hole is enlarged. Finally, the top of the container is cut open and it is allowed to stand until the contents reach 60°F. The contents are then poured into the tag cup and heat is applied at a rate of 2°F. per minute. As the heating proceeds, the test flame is applied until the flash point is reached or until the liquid level has dropped one-quarter inch below the test line. If flash point occurs first, and temperature is below 80°F., the test is considered positive. If the test is positive, the label should state: "Warning (or Caution) flammable. Do not use near heat or flame."

THE second area of potential hazard for the aerosol product is toxicity, which must be considered from several aspects.

Toxicity can result from the chemicals employed and must be considered from the standpoint of inhalation, ingestion, or skin contact. Federal regulations which have adequate protection built in exist, but most manufacturers go well beyond the requirements of law in safeguarding their products.

Other toxicity considerations arise from spoilage due to possible existence of pathogenic bacteria in food products. Here again, Federal, State, and local health regulations policed by inspectors guarantee adequate consumer protection. To my knowledge, there have been no cases of serious injury resulting from chemical or biological toxicity of an aerosol product.

The third, but by no means the least important safety consideration of the aerosol industry is pressure, without which there would be no aerosol industry. The primary consideration from the standpoint of safety is that pressure increases with heat and the package is hermetically sealed. Where excessive heat is applied, the inevitable happens — the container will burst violently. But what can be done in the aerosol industry to keep people from getting hurt, should a container explode?

One area emphasized early was to advertise-label the products to warn against overheating. Very early in the development of the industry, the CSMA composed a precautionary label to appear on all aerosols. This label has been regularly revised and improved with experience until today the statement reads: "Warning, contents under pressure. Do not puncture. Exposure to high temperature may cause bursting. Keep at room temperature — away from direct sunlight, radiators, stoves, hot water, and other heat."

This label statement and the various safety tests that have been developed are followed almost religiously by the aerosol industry, and to this must be attributed no small part of the credit for the remarkably good safety record which has been achieved.

Manufacturers of aerosols have very stringent tests at the production level, as well as at the development level, to give the maximum safety factor possible on these mass-produced low-cost items. Testing begins long before the component parts and chemicals are received. The can companies consistently sample and check container construction. Propellant manufacturers also have elaborate control procedures and maintain large technical staffs to aid aerosol packaging people. At our filling plant, for example, each can, propellant, and chemical received is statistically sampled to make sure they conform to specifications. Every batch blended is carefully checked. Full time quality control is maintained on the filling line itself; weight control is statistical and the actual weight may be accurately calculated in 99.7% of the cans produced. In addition to this, every can is passed through a hot water bath and is totally im-

(*Continued on Page* 74)

Typical uses for the spray can handle include paints, insecticides, window cleaner, and special art sprays. Handle costs consumer 98 cents, but can be removed from one container and used on next one.

The Spray Can Handle

New "ease of use" for the consumer . . .

By E. R. Livingston
President
Alfco, Inc.
Culver City, Calif.

SOMETIMES in the history of a fast growing industry, a leveling off in demand occurs, often seemingly unrelated to other economic conditions. On closer examination it is usually found that a good reason may be the fact that some of the less desirable features of the product or package are becoming known to the customer. He may even have temporarily returned to an original product or stopped using the new package altogether, pending specific improvements.

The aerosol industry's growth has been little short of phenomenal, and there seems to be small chance of a leveling off in the near future. However, customer complaints and dissatisfaction have been with the industry since its beginning and some of these complaints have been important enough to keep the customer from purchasing an aerosol a second time. In other words, it seems that the present push-button device alone does not *always* provide the ultimate in acceptance that will assure continued purchases. Some of these points may be listed as follows:

(1) Lack of positive directional control, necessitating the exercise of extreme care by the user. Some customers, either through carelessness or lack of intelligence, just do not follow instructions. It is possible for the uninformed to subject themselves to a great deal of harm by causing the product to be inadvertently sprayed in the wrong direction, due to their failure to line up the valve properly. The result is, to say the least, frustrating and can be very serious, especially with paints and similar materials. This lack of positive directional control also works against efficient application of such industrial-type aerosols as lubricants, oils and silicone sprays utilized in plastic molding, etc.

(2) This first shortcoming is also sometimes additionally aggravated by the inconsistent finger pressure on the push-button during application, with the result that a varying volume of material is sprayed.

(3) The present aerosol push-button package does not provide a *positive* means of insuring that the hands of the user will not come in contact with the spray material. An article published on page 16 of the January 1959 issue of *Aerosol Age* discloses that women purchase the bulk of aerosol sprays and that the five leaders falling in the category of this article are—insecticides, hair sprays, deodorants, paints and lacquers, and window cleaners. Women character-

istically dislike having their hands come in contact with many of these materials and would be more satisfied customers (and generally happier in the use of aerosols) if the possibility of hand contamination was eliminated.

(4) Many of the present-day aerosol sprays are used continuously and the constant finger pressure on the push-button results in hand fatigue. This is also a contributing factor in the user not being able to maintain a consistent and even pressure.

Although the aerosol industry does recognize these short-comings, it has been relatively slow to consider other aids that could eliminate these complaints.

AN interesting example of the foregoing is demonstrated by national paint manufacturers who were initially skeptical with regard to the use of a paint roller in the application of bulk paint in the home. However, in spite of this initial prejudice, in an uphill battle the paint roller has revolutionized old concepts of paint application. It is now possible for "do-it-yourself" home owners, who are rank amateurs in the use of a paint brush, to re-decorate their homes in a professional manner and with professional results at a low cost. The increased sales realized by the paint manufacturers through the home and professional use of the paint roller have been fantastic, with the result that the paint roller is now readily accepted by paint manufacturers and is distributed by paint dealers throughout the country.

A similar device, representing an improvement in the basic idea of push-button pressurized containers, is the spray can handle. Alfco's version is a snap-on device that converts aerosol spray cans to professional-type spray guns and eliminates most of the disadvantages previously mentioned. A professional research study was done on the consumer reaction to this spray can handle and the results indicated favorable reaction to this type of device as a companion piece to many aerosol products. Following are results of the consumer survey taken in California and Texas:

(a) TEST: Spray Paints

97.94% of all testers reported positive reaction for use of handle.

2.06% of all testers reported negative reaction.

SUMMARY: As might have been anticipated, this test was the most successful of all. In fact, the results provide sound basis for the recomendation that any paint manufacturer package this handle with spray paint. Key advantages cited during these tests were: "Easier . . . faster . . . cleaner." As a result of the survey findings, we believe that this handle will create more feminine interest in spray painting, mainly because it eliminates much of the work effort and produces more satisfactory results.

(b) TEST: Spray Insecticides

96.78% of all testers reported positive reaction.

3.22% of all testers reported negative reaction.

SUMMARY: Many of the women, reporting a negative reaction in other tests, expressed a positive one to this question. Men also were interested and impressed. Safety and lack of exposure to ingredients in spray insecticides were most common answers, as was ease in spraying hard-to-reach places.

(c) TEST: Spray Window Cleaner

92.90% of all testers reported positive reaction.

7.10% of all testers reported negative reaction.

SUMMARY: Responses most frequently brought out in this test were concentrated on the obvious advantage of convenience of spraying with one hand and wiping the glass with the other. Another advantage cited was the ability to reach up higher than ever before, without usual sacrifice of control. The spray was said to go on easier, therefore, came off better.

(d) TEST: Ladies Hair Spray

69.63% of all testers reported positive reaction for use of handle.

30.37% of all testers reported negative.

SUMMARY: Because better than 98% of the entire group executed this test and because of the exceptionally high positive factor in regard to acceptance, this test was judged to be highly successful. In fact, we were surprised at the unusual acceptance these women showed for this new way of applying hair spray. They definitely liked the advantage of more positive control. Many said that for the first time they felt like they were getting complete coverage — front, back, sides and especially under and around the neckline, with no danger of getting hair spray in the eyes. Many also referred to its ideal functional use as a much improved means of application by beauty parlor operators.

It is felt that this market research report indicates highly favorable consumer acceptance for spray can handles. They eliminate most of the problems in connection with application of aerosols and, specifically, offer the following advantages:

a. Instantly snap on and attach to all aerosol cans, converting spray can to professional spray gun.

b. Provide positive directional control to spray better, faster, easier, and cleaner.

c. Consistent finger pressure provides more accurate, even spraying.

d. Keep the hands clean and away from possible contact with the ingredients of the can.

e. Eliminate operator hand fatigue, thus maintaining constant and consistent pressure on the actuator.

f. Provide labor saving and increased efficiency for industrial applications.

g. Overcome most current disadvantages of aerosol use and thus facilitate continuing acceptance of aerosol products.

Aerosol marketers will find it to their advantage to consider spray can handles as a sales tool to sell more products and gain better customer satisfaction. The Alfco handle comes in four-color display packs for retail display. They may be purchased in bulk by aerosol manufacturers for promotional use as a companion item to their own aerosol products.★

There's a fast-growing market for your product...

To help you increase your share of this growing market, CANCO offers the broadest aerosol experience, plus the most complete line of containers in the industry!

In 1959, 530,000,000 pressure cans were used to package products such as shaving lather, shampoo, tooth paste, dessert topping, hair spray, hand lotion, car polish, paint and insecticide.

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- Canco pressure cans have the strongest sideseam construction made.

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CANCO Division AMERICAN CAN COMPANY

New York • Chicago
New Orleans • San Francisco

Consultant's Corner

by Robert A. Foresman, Jr.
Aerosol Consultant
Philadelphia, Pa.

Formulation Concepts for Pressurized Foods

ACTUALLY, there is no particular reason to limit the application of the following comments to foods, as they could just as well apply to several classes of non-foods. However, since foods are absorbing much of the present-day thinking of the pressure packaging field and they constitute the greatest mass application of the aerosol principle, the title is probably most apt.

Almost all food aerosols will be, in some measure, emulsions. As a result, there is bound to be considerable confusion in the understanding and interpretation of the behavior of experimental formulations as they are developed, as well as of the long-term characteristics of apparently finished formulas.

In their simplest form emulsions consist of two immiscible liquids—one existing as small discrete droplets within the other. The portion making up the droplets is known as the dispersed or internal phase, and the portion in which the droplets are dispersed is known as the continuous or external phase. For most foods, and indeed for most emulsions, the two immiscible liquids can be considered to be oil and water. From the preceding generalizations it is obvious that two broad classes of emulsions can exist—namely, oil-in-water and water-in-oil.

So far nothing has been said of permanence or stability of emulsions, which perhaps constitutes the major problem of all emulsion technology. An attempt to disperse distilled water in pure mineral oil, or vice versa, soon reveals the total lack of permanence of the emulsion produced. This lack of permanence reveals the existence of at least one other factor in the production of stable emulsions, a factor provided by one or more of the products from the class of substances known as emulsifiers. Emulsifiers (similar in theoretical make-up to detergents and other surfactants) might be called "linking" or "bridging" agents, inasmuch as they consist of a molecule made up of two parts, one of which has an affinity for water (hydrophilic)— the other for oil (hydrophobic). When the emulsifier is introduced into the oil-water system, the emulsifier molecule arranges or orients itself to grab water with one hand and oil with the other, thereby keeping them from separating. This explains one primary aspect of emulsion stabilization.

So far, we have achieved a stable emulsion only in theory. In practice, however, *few* emulsions will consist of such a simple arrangement. In the matter of edible emulsions it is not possible for us to use just any emulsifier, and a good food product will usually require a complex system of complementary emulsifying and stabilizing factors.

Soaps, certain proteins, starches, glycol, glyceryl, and modified sugar alcohol esters, lecithins, natural and synthetic gums, and pectins are all effective as emulsifiers, under certain conditions. Except for the soaps, all of the groups mentioned contain at least some edible representatives.

In the formation of complex food emulsions, using one or more of the emulsifiers listed in the foregoing paragraph, it has been found that the emulsifier will accumulate as a layer or actual membrane surrounding the dispersed globules. The degree to which this membrane can be maintained intact and unaltered for the most part determines the stability of the emulsion. Damage to the emulsifier layer can occur due to freezing, change in temperature, change in ph, incorporation of air or other gas, agitation, loss of ingredients by evaporation, effect of chemical reactions, time fatigue, etc.

No rules can be given for development of actual formulations of food concentrates, since the possible combinations are ultimately beyond calculation; but a very important aspect of the development and commercialization of such formulas is absolute precision of ingredient quantities and uniformity of ingredient quality. A shift of one or two per cent between any two ingredients in a complex emulsion system can completely ruin the emulsion and make the product a failure!

Cream is an emulsion, as is whipped cream. A little reflection on this fact and the preceding outline may provide a clue for successful modification of a troublesome product. By making sure that *all* the factors of a classic emulsion are present in the product and by choosing the emulsifiers carefully it is possible that a desirable end product can be achieved.

A case in point could be the matter of ice cream toppings. Generally the products on the market are something less than ideal. I know as an absolute fact that turning the concentrate into a properly balanced true emulsion and

(*Continued on Page* 72)

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Insect Resistance Survey Proves Pyrenone Controls Where Others Fail!

RESISTANCE of insects to standard commercial formulations is a problem of national scope! Leading entomologists . . . reporting in a recent insect resistance survey . . . found flies, roaches and other common insects immune to many once-effective insecticides. Pyrenone ***controls*** both resistant and non-resistant insects. By fortifying standard commercial formulations with Pyrenone, new effectiveness and control is assured. Added to standard sprays and powders, Pyrenone provides faster 'flushing', higher knockdown and kill.

Pyrenone, a combination of technical piperonyl butoxide and pyrethrins is virtually non-toxic to humans, pet and warm blood animals. In sensitive food areas where safety is essential, Pyrenone presents no toxicity hazards.

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*Reg. U.S. Pat. Off., FMC

Pyrenone

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Aerosol Technology Now A Part of Michigan State Curriculum

AEROSOL technology, incorporated into the curricula of schools of pharmacy in several colleges (St. John's, Columbia, Philadelphia College of Pharmacy and Science, and the University of California), has been made a part of the four-year course of study leading to a bachelor of science degree at the School of Packaging of Michigan State University, East Lansing, Mich. The chemistry and physical principles behind aerosol packaging are part one of the school's major packaging courses entitled "Consumer Packaging."

According to Hugh E. Lockhart, one of the instructors: "In lecture and reading assignments, the operating principles of the aerosol package are discussed and several types of propellant-product combinations are explained and differentiated. Standard and unique current applications are presented, as are sprays produced with several different valve types and actuators." Mr. Lockhard emphasizes that this course is part of the regular undergraduate curriculum and that there are no short courses or night classes offered by the school. Seven packaging courses make up the major part of each student's curriculum, and supporting and supplementary courses are taken in many departments and colleges of the University.

In the section on Consumer Packaging, Mr. Lockhart explains, "the laboratory work treats three types of

(*Continued on Page* 75)

Curriculum
MICHIGAN STATE UNIVERSITY SCHOOL OF PACKAGING

Fall Quarter	Winter Quarter	Spring Quarter
FRESHMAN YEAR		
Communication Skills, Basic	Communication Skills, Basic	Communication Skills, Basic
Natural Science, Basic	Natural Science, Basic	Natural Science, Basic
Introductory Chemistry	Introductory Chemistry	Introductory Chemistry
College Algebra	Trigonometry	Analytic Geometry
Health, Physical Education and Recreation	Health, Physical Education and Recreation	Health, Physical Education and Recreation
Military Science	Military Science	Military Science
SOPHOMORE YEAR		
Social Science, Basic	Social Science, Basic	Social Science, Basic
Calculus I	Calculus II	Calculus III
Principles of Packaging	Introduction to Economics	Quantitative Analysis
Introductory Physics	Introductory Physics	Introductory Physics
Health, Physical Education and Recreation	Health, Physical Education and Recreation	Health, Physical Education and Recreation
Military Science	Military Science	Military Science
JUNIOR YEAR		
Humanities, Basic	Humanities, Basic	Humanities, Basic
Packaging Materials I	Packaging Materials II	Industrial Packaging
Principles of Management I	Manufacturing Processes I	Industrial Engineering
Mechanical Drawing	Studio Art	Business & Technical Reports or Expository Writing
Physical Chemistry	* Electives	* Electives
SENIOR YEAR		
Consumer Packaging	Packaging Cost Analysis	Business Speaking
Seminar	Business Letter Writing	Survey of Accounting Concepts
Survey of Business Law	Statistical Methods in Engineering	* Electives
* Electives	* Electives	

* A student must complete a total of 35 or 36 credit hours of elective course work to fulfill the 200 credit hours required for graduation. This elective work is to be selected in consultation with his advisor and is typically taken in one of the following areas.

Industrial Packaging	*Consumer Packaging*	*Packaging Design*
Differential Equations	Bacteriology	Marketing
Statics	Food Technology	Advertising
Dynamics	Organic Chemistry	Studio Art
Strength of Materials	Polymer Chemistry	Life Drawing
Marketing		Industrial Design

Practical Experience Requirements

Twelve weeks of practical experience within industry is required before a student in the School of Packaging is recommended for graduation. A detailed report and a favorable statement on the quality of the student's work from the employer must be submitted as a part of the Senior Seminar Course.

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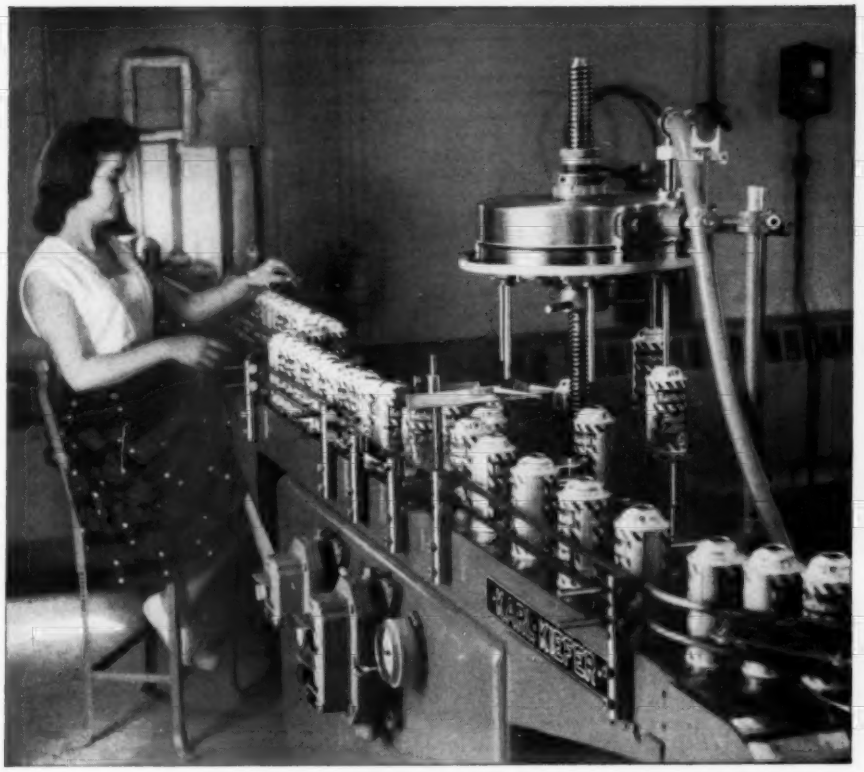
KARL KIEFER

VARI-VISCO

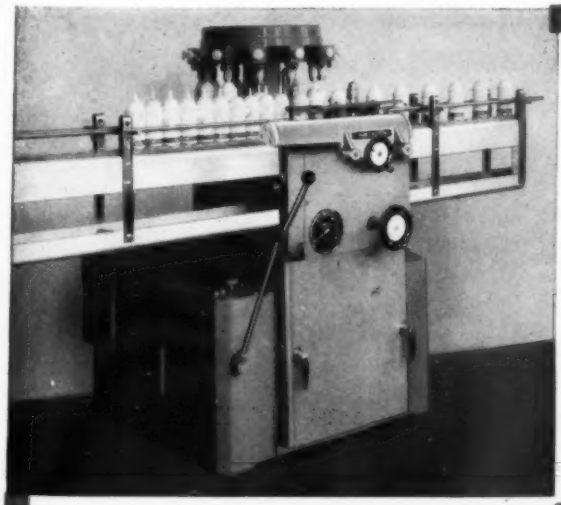
FILLER



Photograph, courtesy American Can Co.

It is accurately measuring BARBASOL SHAVING CREAM into AEROSOL CANS. Yes, and the young lady will look the same at the end of every day. Why? Because there is neither splash nor drip, nor stringing from this fine, dependable Kiefer equipment.

— ● —



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A new line of five aerosol products has been introduced by Durazone (Sales) Ltd., London N. 3, England. All in six-ounce containers, they will reportedly retail at 25 to 35% lower than corresponding products of the same type. The **Choice** fly killer, air purifier, and moth proofer, for instance, will retail at 2s.11d. each (about 40 cents U. S.) The cold relief product contains triethylene glycol, eucalyptus, camphor oil, menthol, and thymol. **Kill Cold** will retail at 63 cents and **Sprayclean** at 46 cents.

One of the best-selling new products in Great Britain is **Pledge**, a product of S. C. Johnson & Son, Ltd., Westdrayton, Middlesex, England. Metal Box container is equipped with a mechanical break-up actuator on a Micro-Mist valve made by The Risdon Manufacturing Co., Naugatuck, Conn.

NEW PRODUCTS AND PACKAGES

Four new aerosol cosmetic products introduced in Great Britain include: **Sooth Tan** (Cupal Pharmaceuticals, Ltd., Blackburn, Yorkshire), **Hi Styler,** a hair spray (Steiner, London); **Coty Mist** (Coty, London); and **Yardley Spray Mist** (Yardley of London). All four use mechanical breakup valve made by Bespak Industries, Ltd., British licensee of Risdon Manufacturing Co., Naugatuck, Conn.

Spring Fancy is a new line of aerosol products introduced last month by Prince Matchabelli, Inc., New York. Line includes cologne spray mist, skin perfume and spray puff talc (not shown).

Spray 'n Soothe is an aerosol foot powder marketed by Podiatry Laboratories, New York. It will retail at 98 cents for the six-ounce container. Cools, dries, and deodorizes.

Perk Up is another aerosol starch product introduced by T. M. Products Co., a subsidiary of Textile Mills Co., Chicago. Described as a permanent starch, it comes in a 15-ounce container retailing at 79 cents.

Original Multakolor is an all-purpose textured-enamel developed by United Lacquer Mfg. Corp., Linden, N. J. It may be applied to any surface, including sheetrock, plastic, metal, or composition, as well as wood.

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Acidity, as Acetic, Wt. o/o	0.002 Max.
NVM, Wt. o/o	0.003 Max.
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AEROSOLS in review

In this column important aerosol subjects appearing in other periodicals (both domestic and foreign) will be reviewed and summarized. It is felt that this service will enable the reader to keep abreast of most of the significant contemporary articles on the industry, even though they may appear in other periodicals. Since there is a chance that some pertinent articles may be overlooked, it will be helpful if readers will call our attention to any they judge important enough to review.—*The Editor.*

Aerosols Seen Becoming Increasingly Important for Paints

AEROSOLS will eventually capture nearly all sales of one-half or one-quarter-pint standard paint cans and 50% of the pint sales, "a major propellant producer" is quoted as predicting in the Feb. 13 issue of *Chemical Week*. In a comprehensive article on how much of a factor pressurized paints have become in relationship to the entire paint industry, *Chemweek* points out first that spray paints are the fastest growing segment of the entire aerosol field. The article reports that some 85 million aerosol cans will be sold this year, at a total retail value of close to $111 million.

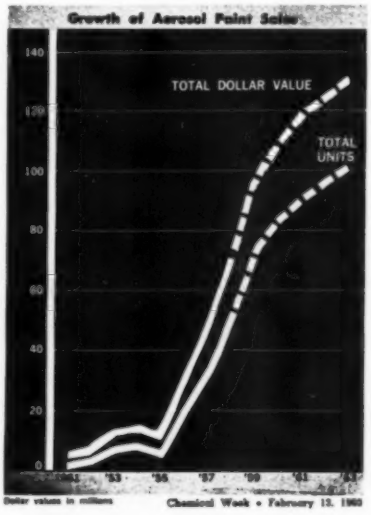
Acknowledging that aerosol sales account for about four million gallons, or only 3% of the total paint industry output of 160 million gallons of brush-on paint, the article predicts that 103 million or more cans of pressurized paints (worth over $133 million) "will likely be sold by 1963."

As to numbers of the top paintmakers now in the aerosol business, *Chemweek* suggests that about one-third are already selling some type of aerosol paint product. Seymour of Sycamore, Sycamore, Ill., is suggested as the earliest marketer of pigmented paints in aerosol form (1949).

"With the exception of Krylon, Sprayon, Sargent-Gerke, and a few others, paintmakers and marketers do *not* have facilities for filling their own aerosols. Most big custom-fillers have been slow to enter this phase of the business, fearing that the process of filling paint would be too messy. But rising sales of spray paints are changing this attitude.

"Most spray-paint technical bugs have been eliminated, leaving only a few problems no more bothersome than those encountered with use of conventional enamel paints. Valves are constantly under test and, although major clogging problems have been licked, all companies are optimistic about development of a better valve.

"Most remaining problems are caused by improper application of the aerosol by users, but they're being solved by paintmakers' consumer education programs. In fact, most companies report that their main problem is misuse of the can itself."



As to future trends with aerosol paints, the *Chemweek* article predicts more colors, easier application, and more specialty products of the multicolored and textured paint variety. Water-based aerosol paints will appear soon, possibly this year, and prices will remain about the same.

•

CONSUMER agitation over high drug prices, phony advertising, rigged television advertising, etc., may herald a determined and long-lived consumer uprising, suggests Stephens Rippey, Washington correspondent of *Drug Trade News*, in the Jan. 25 issue of that periodical. Mr. Rippey points out that the food, drug, and cosmetic industries may "be in for more trouble than they ever dreamed of because it means the customers are in a no nonsense mood in a big way."

Acknowledging that no specific survey data exists about this consumer revolt, Mr. Ripley declares: "The evidence lies in the reaction — which still hasn't ceased — to a series of recent governmental activities which have struck home to thousands of Americans. These activities may have touched off a sort of consumer revolution which has been smouldering for years, but has lacked cohesive force and central direction. It still doesn't have central direction in a strict sense, but Washington seems to be providing a kind of cohesion and the sparks needed to start the fire."

What he describes as general public approval of Health, Education and

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welfare Secretary Flemming's action on cranberries, plus similar approval of Senator Kefauver's probe on drug prices and the FTC action on phony advertising claims, Mr. Rippey contends are all indicators of this trend in consumer thinking.

"If the movement is real and deep-seated, as some very well posted people here believe, it means that federal agencies charged with consumer protection are going to flap their wings and do their best to keep it moving. With an increasing awareness by the daily press, magazines, radio, and television that good stories are to be had for the asking at agencies which they have largely ignored in the past (FDA, FTC, primarily), consumers are learning for the first time on a large scale that agencies exist in Washington with the primary duty of protecting them.

"These agencies are getting more money and more publicity. They are being goaded by members of Con-

(*Continued on Page 72*)

Another Way to Prevent Cap-Switching or Tampering

A mechanical locking device which prevents cap-switching, and other possible pre-sale consumer tampering in self-service retail outlets has been developed by Spra-Lok Corp., wholly-owned subsidiary of Dupli-Color Products Co., Chicago.

A silver foil label covers an opening on each cap, and any key may be inserted to unlock the device and release the cap. The unbroken seal assures the customer that he is receiving a factory-sealed product. If the seal is broken, it indicates to the retailer that the cap has been removed and the valve possibly damaged or at least "tried out." After the customer breaks the seal and removes the cap it may be relocked in position to prevent use by children in the home. Each time the can is used for spraying, the cap may be released by insertion of a key.

According to S. E. Edelstone, president of Dupli-Color, the device received considerable attention at recent automotive and paint shows.★

NEWS of Pressure Packaging

Risdon Names Two in Sales

Russell R. Ayres, Jr., has been named general sales coordinator of The Risdon Manufacturing Co., Naugatuck, Conn. and

R. R. Ayres J. K. Quinn

John K. Quinn has been appointed assistant sales manager of the firm's Cosmetic and Aerosol Division.

Mr. Ayres, who has been with Risdon since his graduation from Harvard College in 1940, will coordinate sales activities of the company's Aerosol, Cosmetic and Metal Goods Divisions. He had been sales manager of the Metal Goods Division since 1952. Born in Montclair, N. J., he served with the U.S. Army Engineers in the European and Pacific Theaters in World War II.

Mr. Quinn joined Risdon in 1956 as a sales engineer. A graduate of Yale University, he was an ensign, USNR, during World War II.

Risdon Manufactures aerosol valves and containers; cosmetic containers such as lipstick cases, and metal components used in industrial and consumer products.

•

CSMA Plans Golf Outing

The Chemical Specialties Manufacturers Association has announced that its first annual golf outing will be held on Thursday June 16 at the Knollwood Country Club, White Plains, N. Y. The announcement said a second outing would be held in the Midwest area later in the year.

•

Aerosols in College Course

A lecture on "Aerosol Packaging" by W. Earl Graham, of the Clayton Corp., St. Louis, will be part of an evening course titled "Fundamentals of Food Technology" given at The City College of New York. The course, which began Feb. 8, is one of a number of engineering evening courses, without degree credit, given in review and preparation for the N. Y. State professional engineer's license examination.

•

PI Sets Aerosol Symposium

A seminar on aerosol packaging will be one of four topical professional member seminars to be conducted by the Packaging Institute during 1960. Scheduled for June 1 in New York City, the seminar will have Fred T. Pickerell, of Schering Corp., as moderator. He heads the recently formed Aerosol Committee of the Packaging Institute.

Adhering to the format of two similar meetings held in 1959, the aerosol session will feature panels of experts (representing user, supplier, and other interests) taking part in roundtable discussions of questions submitted in advance. No questions from the floor will be accepted, and there will be no prepared papers. No recording of these informal discussions will be made; therefore no printed proceedings will be made available afterward. All Packaging Institute members have been urged to submit questions for consideration by the aerosol panel.

The other three seminars include one on glass containers, scheduled for April 12 in New York; one on folding cartons, Sept. 14 in Chicago; and one on resins and their packaging applications to be held Sept. 28 in New York City.

Registration fee for each seminar will be $25, which will include lunch. The Packaging Institute's professional membership now numbers 425.

•

Renuzit Elects Walpert

Howard Walpert has been elected vice-president, marketing, a newly created position, at Renuzit, Inc., Philadelphia. The company markets aerosol spot removers and other products.

Schrader Appoints Ferry

A. Schrader's Son, a Division of Scovill Manufacturing Co., Inc., Brooklyn, N.Y., last month announced the appointment of Royal T. Ferry, Jr. as chief engineer of aerosol products, in charge of Schrader's accelerated engineering activities in this field. Mr. Ferry has had long experience in all phases of aerosol valve research, development, and production. He joined the Bridgeport Brass Co.'s Aerosol Division in 1949 and recently was chief engineer with the Valve Corp. of America. Immediately prior to joining Schrader he was with the Kartridg Pak Co., aerosol filling equipment manufacturer.

Mr. Ferry attended the University of Connecticut and the University of Michigan and received his B.S. in mechanical engineering at University of Bridgeport. As an active member of the Chemical Specialties Manufacturers Association, he has served on that group's Scientific and Publicity Committees. During World War II, he was an Air Force officer in the Far Eeast. Born in Connecticut, Mr. Ferry lives in Southport with his wife and three children.

A. Schrader's Son, founded in 1844, is the largest manufacturer of tire valves and air control equipment in the world and is located at 470 Vanderbilt Ave., Brooklyn.

•

Gould Heads Boyle-Midway

Bernard Gould has been elected president of Boyle-Midway, Inc., a subsidiary of American Home Products Corp., New York, and a leading marketer of aerosol products. Formerly assistant to the president, Mr. Gould had been acting president since the recent retirement of Streider Schraffenberger.

•

Breck Appoints John Hughes

John H. Breck, Inc., Springfield, Mass., marketer of aerosol hair sprays, has appointed John P. Hughes to the post of advertising manager. He will be responsible for coordinating the company's advertising and publicity functions with overall plans and policies. He joined Breck in 1949 and became assistant advertising manager in 1953.

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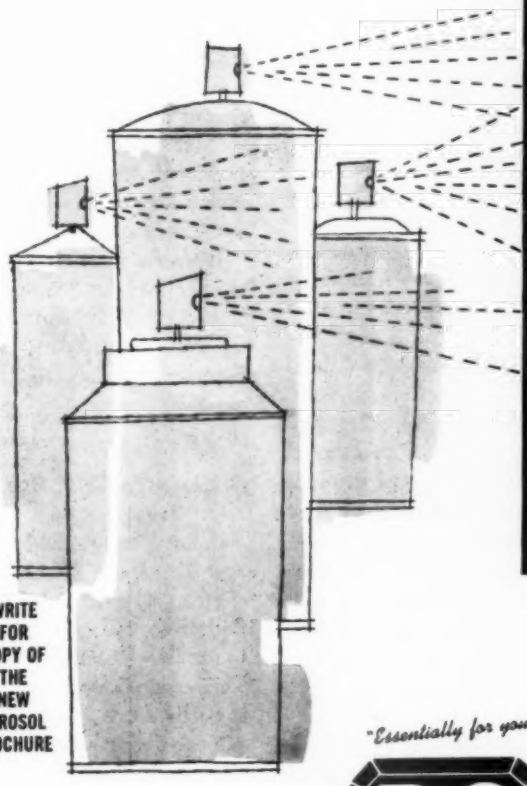

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ATI Lists Four Staff Changes

Aerosol Techniques, Inc., Bridgeport custom filler, has announced four major staff changes.

Philip H. Kleppe Jr. has been named manager of quality control. Dr. Peter Sgaramella is new assistant plant manager in charge of chemical

Wisniewski

Sgaramella

manufacturing. Charles L. Biancheri is assistant plant manager in charge of production and packaging. Ben C. Wisniewski is supervisor of maintenance.

The staff realignment at the main plant of ATI has been effected to implement the company's expanded operational program, H. R. Shepherd

Kleppe

Biancheri

ATI president said, and entails added responsibilities for the new appointees, all of whom are veterans of the company.

Mr. Kleppe, who will be responsible to Fred Present, director of research and development, has been research and development chemist at ATI. Prior to joining the company he was a control chemist with Raybestos-Manhattan.

Dr. Sgaramella, a key man since the inception of ATI, worked with Propel Chemicals before joining Aerosol Techniques.

Mr. Biancheri, with ATI four years, was formerly with Revlon and Cutex.

Du Pont Reassigns Three in "Freon" Division Sales

A SERIES of changes in the assignments of its technical sales representatives has been announced by the "Freon" Products Division of E. I. du Pont de Nemours & Co., Wilmington 98, Del. Robert A. Geuting has been assigned to the division's Chicago office, William B. Gest to Cleveland, Lawrence R. Sullivan to New York, and Patrick B. O'Donnell to a new sales territory in the Houston area.

Mr. Geuting has been the division's Cleveland area sales representative for the last four and a half years. He served as a naval officer before joining DuPont's "Freon" Products Division as a salesman in 1954.

Mr. Gest, a graduate of Ohio State University, has been associated with DuPont since 1941. He joined the Petroleum Chemicals Division as a salesman in 1947, was assistant district manager in its West Coast region from 1953 to 1956, and sales supervisor in its Central Region until mid-1959, when he was transferred to the "Freon" Products Division.

Mr. Sullivan, a graduate of Worcester Polytechnic Institute, joined DuPont's Petroleum Chemicals Division as a sales representative in 1951. He was an account manager in that division's Boston, San Francisco, and New York areas until his transfer to the "Freon" Products Division early this year.

Mr. O'Donnell attended St. Columbus College in Londonderry, Ireland, and the College of Technology in Belfast before coming to the United States in 1949. He joined DuPont in 1951, and held various accounting positions until 1959 when he was transferred to the "Freon" Products Division. Since last October he had been assigned to the Central district office in Chicago as sales correspondent.

•

Perfumers Plan April Meeting

The sixth annual open symposium of the American Society of Perfumers will be held on Thursday, April 28 at the Essex House in New York City. Formal presentation of papers, beginning at 2 p.m., will be followed by a buffet supper.

New Corporate Unit Formed

Wheaton Plasti-cote Corporation, a new corporation which will be primarily concerned with the plastic coating of bottles for pressurized products, has been formed by the Wheaton companies, major producer of coated glass aerosol containers. According to Frank H. Wheaton, Jr., president of the Wheaton Companies, the move was made because of the rapid growth of the Wheaton Plastics Co. over the past ten years, especially in the aerosol container field.

Robert N. Allen, formerly of Wheaton Plastics and Bridgeport Brass Co., was named vice president and general manager of the new company. Richard Taylor will continue as vice president and general manager of Wheaton Plastics, which will continue its operations as a supplier of injection and blow-molded plastic parts and containers.

The prime function of Wheaton Plasti-cote will be the manufacture and sale of plastic-coated aerosol containers. Basic development work will also be carried on to expand the function of plastic-coated glass for use in the laboratory, and application of various materials for the production, decoration, or insulation of other materials and devices.

Wheaton Plastics was the first developer of the plastic-coated glass aerosol container, which today is used for a wide range of pharmaceuticals, perfumes and colognes, and specialty aerosol products.

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Brickner To Calif. Cos. Post

John Brickner, sales representative and Los Angeles branch office manager of Dodge & Olcott, Inc., has been elected associate chairman of the California Cosmetic Association, and to the association's board of directors. This group is composed of the major cosmetic firms in California—Avon, Max Factor, and Merle Norman being among the members.

Mr. Brickner will preside at all meetings of associate members (the suppliers) and will act as their spokesman to the regular members (the manufacturers) and to the board of directors.

Aerosol Permanent Wave is Placed on Market

AN aerosol permanent wave, termed by its marketer "the most significant development in permanent waving in the past ten years," has been introduced by Caryl Richards, Inc., New York. Called "Aero Wave," it will retail at $2 for a 3.75-ounce container, with distribution aimed primarily at beauty salon operators and secondarily at the general consumer.

"Aero Wave" is marketed with a companion product, a new aerosol neutralizer developed by Rayette Co. Both products are in epon-coated lightweight, lithographed aluminum containers made by Peerless Tube Co., Bloomfield, N. J., and are equipped with Precision valves with aluminum mounting cups. Special adapter, designed to relieve operator fatigue and also to produce a stream rather than a spray, was perfected in Caryl Richards' own laboratory.

The product is the result of two years of intensive research work by Caryl Richards and its custom filler, Aerosol Techniques, Inc., of Bridgeport. Chief problem was stability of container and modification of formula to provide for compatibility with the fluorinated hydrocarbon propellants. As with most cold wave permanents, formula consists mainly of ammonium thioglycolate, with a base other than ammonia to reduce objectionable odors. Product comes in three separate formulations—for normal, dyed or bleached hair, and for difficult-to-wave hair. Each $2 package is said to be good for a single permanent. Aerosol dispensing, with its added control, is said to cut 20 minutes from the usual 90 minutes required for a permanent.

A similar product, this one in a coated-glass bottle by Wheaton, is already being test marketed by Procter & Gamble. This is an aerosol version of P & G's "Lilt".

Caryl Richards has applied for a patent for its formulation.

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Interpack, FEA Meeting to Coincide

Interpack, the International Packaging Exhibition, last month issued a list of exhibitors at its show to be held in Dusseldorf, Germany, April 20-27. Though aimed primarily at the confectionery industry, the show will feature a number of aerosol exhibits. It is to be held in conjunction with the second meeting of the European Federation of Aerosol Associations and also the European Packaging Federation.

The show will be housed in six large halls at the Dusseldorf exhibition grounds, giving it a total area of over 51,000 square yards of exhibits. Exhibitors include the following aerosol firms:

Aeratom Ltd.
Rapperswil, Switzerland
Aluminiumwerke Gottingen GmbH
Gottingen, Germany
Arenco GmbH
Stuttgart, Germany
Beiersdorf & Co.
Hamburg, Germany
Druk-Pak AG
Zurich, Switzerland
Glaswerke Ruhr
Essen-Karnap, Germany
Prazisionventil GmbH
(Precision Valve)
Frankfurt/M, Germany
J. A. Schmalbach
Braunschweig, Germany
Seaquist Valve Co.
Cary, Ill., U.S.A.
Smith & Nephews
Herts, England
Solfrene S.p.A.
Corsico, Italy
Union Carbide International Corp.
New York, N. Y.
Johann Waldherr
Mannheim, Germany

The meeting of the Federation of European Aerosol Associations will take place on Wednesday, April 27 at the Park Hotel, Dusseldorf. The Interessen-Gemeinschaft Aerosole (German Aerosol Assn.) will play host to the meeting.

Included on the program will be papers on *Aerosol Regulations*, *The Aerosol Glass Bottle*, and *Aerosols in Cosmetics and Pharmaceuticals*. Speakers thus far announced include A. Herzka, British aerosol consultant, and Dr. K. Otto Jacobi, of the Colmar Research Center.

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Fechheimer Heads Kiefer

The Karl Kiefer Machine Co., Cincinnati, aerosol equipment manufacturer, last month announced the election of Paul R. Fechheimer as president and chief executive officer. He succeeds James A. Rheinstrom, president for 29 years, who moved up to chairman of the board. Harry C. Goeltz was named vice-president and Philip V. V. Hurlbut sales manager.

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Jellinek Joins PFW

Dr. J. Stephan Jellinek has joined the perfume staff of Polak's Frutal Works, Inc., Middletown, N. Y. Upon completion of his chemical studies at Cornell and Wisconsin Universities, he was in the perfume department at PFW in Amersfoort, Holland.

N. Y. Firm Buys Plasti-Kote

The New England Industries, Inc., New York, a private company, last month acquired all outstanding stock, for an undisclosed sum, of Plasti-Kote, Inc., Cleveland, a leading manufacturer of aerosol paints. The announcement was made by Carl J. Schumer, secretary and general counsel for The New England Industries.

Mr. Schumer said that Herbert Fine will remain as president of the Plasti-Kote operation. Elias Shapiro becomes executive vice president, while Paul Shulman continues as treasurer. New officers of the company include L. Kenneth Mayer, vice president; Mr. Schumer, secretary, and Alfred A. Odrian as controller.

Mr. Shapiro reported that Plasti-Kote's sales showed a significant increase in 1959, and predicted that 1960 would also be a year of substantial growth. The company manufactures a wide variety of aerosol spray paints, enamels, lacquers and stains, as well as a number of non-paint specialty products. Plasti-Kote has been a pioneer in the aerosol paint field, and its products have gained wide acceptance by both industry and home consumers.

St. John's University Announces Aerosol Seminar Program

A NUMBER of leading industry authorities have been listed as speakers for the seminar on aerosol technology to be held at St. John's University College of Pharmacy, Jamaica, L. I. Beginning March 24 and continuing until May 5, the six two-hour sessions will be held from 7 to 9 p m. on consecutive Thursday evenings. There will be no session on Thursday, April 14. The fee for the series is $30.

Intended mainly for those who want something more than just a basic knowledge of the subject, the program is under the direction of Dr. John J. Sciarra, associate professor of pharmaceutical chemistry at the college. Additional details may be obtained by writing directly to Dr. Sciarra at the College of Pharmacy, St. John's University, Jamaica 32, N. Y.

The program will consist of the following papers:

MARCH 24 —
Introduction, by John J. Sciarra, Ph.D. (St. John's University)
Aerosol Principles, by Francis A. Mina, Ph.D. (Lodes Aerosol Consultants, Inc.)
Nomenclature and Manufacture of Liquefied Gas Propellants, by Lloyd T. Flanner, (General Chemical Division)

MARCH 31 —
Physical and Chemical Properties of Liquefied Gas Propellants, Samuel Livingood, Ph.D. (Union Carbide Corp.)
Toxicity of Liquefied Gas Propellants, Fred T. Reed, Ph.D. (DuPont)
Compressed Gas Propellants—(Speaker Not Yet Announced)
Panel on Propellants—David S. Tillotson, Panel Moderator; Lloyd T. Flanner; Samuel Livingood, Ph.D.; Fred T. Reed, Ph.D.

APRIL 7 —
Aerosol Containers—Larry Garton (American Can Co.)
Aerosol Valves—Walter Beard (Risdon Mfg. Co.)
Panel on Aerosol Components—Edward Budzelik, (Wheaton Plastics Co.) Panel Moderator; Walter Beard; Larry Garton; C. Hollopeter (Owens-Illinois Glass Co.); Joseph Pizzuro (Precision Valve Co.)

APRIL 21 —
Food Aerosols—Earl Graham (Clayton Corp.)
Medicinal and Pharmaceutical Aerosols—John J. Sciarra, Ph.D. (St. John's University)
Cosmetic Aerosols—Victor Di Giacomo (Givaudan-Delawanna Co.)

APRIL 28 —
Aerosol Packaging Equipment—John Hart (John C. Stalfort Co.)
Plant Operation—Anthony Iannacone (Fluid Chemical Co.)
Laboratory Equipment (Demonstration) John J. Sciarra, Ph.D. and Staff

MAY 5 —
New Drug Applications for Aerosols—(Speaker Not Yet Announced)
Awarding of Attendance Certificates and Reception

Outlaws Insecticide Vaporizers

The State of Kansas recently issued a regulation which prohibits the sale of continuous or nearly continuous vaporizers intended for use with household insecticides. The regulation does not apply to automatic aerosol devices, since it specifically refers to devices intended to "vaporize *by heat* any chlorinated hydrocarbon insecticide."

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Keepper Heads Chicago Assn.

L. H. Keepper, of Abbott Laboratories, has been elected president of the Chicago Perfumery, Soap & Extract Association. Also elected for the 1960 term were John P. Helfrich, of Helfrich Laboratories, first vice-president; Harold W. Jelly, Walter Jelly & Co., secretary; and George G. Kolar, Kolar Laboratories, Inc., treasurer.

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Hazleton Expands Plant

Hazleton Laboratories, Falls Church, Va., recently completed an expansion of 10,000 square feet of research facilities for studies of the effects of chemicals on biological systems. The company is an independent research laboratory which does studies on cosmetics, drugs, food additives and pesticides to determine short- and long-term effects on body organs and functions.

Hazleton Laboratories will complete another 12,000 square foot expansion this spring. Designed as a research laboratory, it will serve as an administration building until further expansion programs are completed.

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TV Station Honors Gattone

Daniel H. Gattone (right), co-holder of the Birch-Gattone aerosol patent and developer of the "Lif-O-Gen" oxygen unit, last month was presented the Public Service Award of WRCV-TV, Philadelphia affiliate of NBC in recognition of his work in developing the low pressure emergency oxygen inhalant. The award, give as part of the television station's recognition of National Heart Month, was presented by NBC vice president Raymond Welpott, who termed the oxygen unit "a great contribution to the millions of heart disease victims throughout the world." The presentation was carried by the television station in a special colorcast shown Feb. 3 at 6:27 p.m.

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E. Howard Kester Dies

E. Howard Kester, for the past five years regional sales manager in Pennsylvania and lower New Jersey for the John C. Stalfort & Sons Co. contract packagers of Baltimore, Md., died suddenly at his home in Glenside, Pa. January 20.

Well known in the chemical specialties and aerosol packaging trade fields, he was a co-founder and vice president of Krylon, Inc., before joining Stalfort's sales staff. Surviving are his wife, two sons, two daughters, his mother and a sister.

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Form New Co. in Kenya

Aeropacks, Ltd., a new company to formulate and package aerosol sprays, has been formed in Kisumu, a city in West Kenya. Principals of the firm are A. H. Myatt and S. H. Chapman.

N. Y. SCC Installs Slate of Officers for 1960

This photograph, just released by the New York chapter of the Society of Cosmetic Chemists, shows the 1960 officers of the chapter. From left to right: Martin Katz (Revlon), treasurer; Miss Agnes Korte (Givaudan-Delawanna), secretary; Dr. John M. Longfellow (Colgate-Palmolive), chairman; and Saul Bell (Chesebrough-Pond's), chairman-elect. Dr. Longfellow has been an active member and officer of the New York chapter since 1955.

Reddi-Wip Names Agency

Reddi-Wip, Inc., Los Angeles, major marketer of aerosol food toppings, has named Kenyon & Eckhardt to be its advertising agency as of May 1. Top-Wip, Inc., an affiliate of Reddi-Wip, has been using Kenyon & Eckhardt since last July, while Reddi-Wip has used D'Arcy Advertising and North Advertising. Reddi-Wip has a current advertising expenditure of $1 million, Top-Wip about $500,000.

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Fair Trade Bill Doomed

Washington observers last month said the Kefauver Anti-Monopoly Subcommittee's charges, coupled with the fact that 1960 is an election year, have apparently killed off any slim chances for passage of the fair trade bill at this session of Congress. In fact, it is the opinion of some that the bill may not even be passed in *future* sessions, despite intense lobbying by major marketers and strong backing by Senators Humphrey and Proxmire and Representative Harris, sponsors of the bill.

A new body of opposition to the bill apparently resulted from disclosures by the Kefauver subcommittee that drug prices, always of crucial interest to older people, had been marked up excessively. Congressional mail from the so-called "health states" —Florida, Arizona, and California— indicated an increasingly hostile attitude toward the bill by older people.

Even the bill's sponsors, including Senator Humphrey (himself a presidential candidate), a former pharmacist, apparently have lost interest in pushing it through this year. The bill has cleared one hurdle, having been reported favorably by the House Interstate and Foreign Commerce Committee by a three-to-one vote. But the House Rules Committee has put the measure far back on its list of bills for consideration, and only three Representatives are reported ready to vote favorably on the measure.

South Carolina's powerful Senator J. Strom Thurmond, chairman of the Senate Interstate and Foreign Commerce Committee, was the latest Congressional leader to express strong opposition to fair trade. He declared: "I am convinced that fair trade is not in the interest of the people of the United States. Moreover, there are grave constitutional questions concerning the validity of any law passed. I will continue to oppose any so-called fair trade legislation."

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Shulton Expands Canada Plant

Shulton of Canada, Ltd., recently announced plans to add 15,000 square feet of space to its Toronto plant. The plant, which already produces aerosol shaving cream, room deodorizers, and insecticides, was first acquired in 1956. Facilities will also be added to begin production of the hair coloring and tinting agents acquired by Shulton through the purchase of Tecnique, Minneapolis hair coloring product manufacturer.

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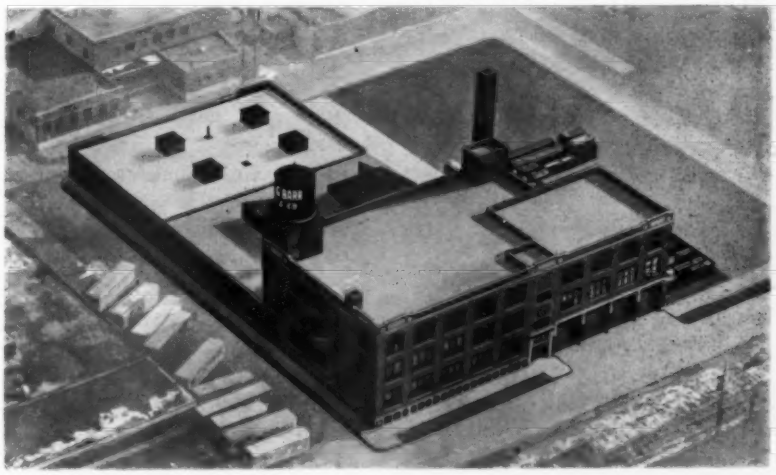
Stone to Lanolin Plus

Lanolin Plus, Inc., Chicago, has appointed Sherry D. Stone public relations director and fashion coordinator.

G. Barr Expands Aerosol Plant By 15%



G. Barr and Co., Chicago custom filler, has expanded manufacturing and warehousing space by 15%. The newly leased space is a 15,000 square foot, one-story building adjoining the company's 100,000 square foot building at 3601 South Racine Street.

The company has leased an additional 20,000 square feet of outdoor space to enlarge railroad siding and car parking facilities. With the expansion, G. Barr's plant now extends the full block between South Racine and South May Streets.

Head of U. S. Steel Hints of New, Lighter Tinplate

A "lighter, thinner, and stronger" tinplate, which could be of considerable importance to the manufacture of aerosol containers, is in the advanced stages of development by his company, Roger M. Blough, board chairman of United States Steel Corp., told a convention of the National Canners Association in Miami Beach recently. He revealed that the promising new tinplate is being studied at U.S. Steel's research center at Monroeville, Pa.

In the same address Mr. Blough said that U.S. Steel's announcement that it did not contemplate any increase in the general level of its steel prices for the present was based on competitive and other factors, and that the company had made no commitment to Government officials regarding future price action. Since the price of tinplate aerosol containers is usually closely pegged to increases in prices of steel, Mr. Blough's statement has been carefully studied by aerosol marketers and fillers.

He declared that there have been "critical statements having political overtones to the effect that Government officials, in recommending the terms of the steel settlement, had been given some sort of commitment that the steel companies would not raise their prices until after the election. I would like to make it clear that *no* such commitment was asked and none was given."

Mr. Blough pointed out that the settlement would increase the employment costs to the steel companies by about 3½ to 3¾% annually on the average. "It seems clear that the rippling effect of the new settlement —that is, its effect on other wage settlements in other industries—will be less inflationary than the earlier agreements."

The steel executive said he had no way of knowing what the cost will be in connection with the agreements which the Steelworkers made with Kaiser and with companies in the aluminum, copper and can-making industries, but to apply the same terms to the steel industry would result in a much heavier cost. "The cost of those benefits, if applied to the steel industry, would have ranged from 4½ to 5%—or from 10 to 15 cents an hour more over the period of the agreement. So in comparison with these costs our 3½ to 3¾% looks considerably less inflationary."

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Cusack Heads Comp. Gas Group

George C. Cusack, executive vice-president of Pure Carbonic Co., a division of Air Reduction Co., was elected president of the Compressed Gas Association, at the association's 47th annual meeting held Jan. 18-20 in New York. Other officers elected included D. M. Horner, president, Harrisburg Steel Co., a division of Harsco Corp., first vice-president, and Richard S. Passmore, manager, Ammonia Division, Armour Industrial Chemicals Co., second vice-president. Franklin R. Fetherston, who has been secretary-treasurer of the association since 1927, was reelected to that office. (In the photograph, left to right, are Messrs. Cusack, Horner, Passmore, and Fetherston.)

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Fowle to Colgate Post

The appointment of Wilson F. Fowle, Jr. as Wildroot Product Manager has been announced by the Toilet Articles Division of the Colgate-Palmolive Co., New York. He will be responsible for the entire line of Wildroot products, one of the leading men's hair grooming lines, reporting directly to K. B. Arrington, general product manager of the Toilet Articles Division.

Prior to joining Colgate-Palmolive, Mr. Fowle served for more than five years with the Benton & Bowles advertising agency, most recently as a senior account executive on package goods products. He is a graduate of the University of Virginia.

Risdon Names Exec. VP, 3 New Officers

TWO of Risdon's aerosol executives were named vice-presidents late last month as a number of important executive appointments were announced from the company's headquarters in Naugatuck, Conn. The list of appointments was headed by that of Lewis A. Dibble, Jr. to the post of executive vice-president.

At the same time, Lawrence F. Heileman, Edward Noyack and Donald S. Tuttle, Jr., were elected vice-presidents, and Malcolm Baldridge and Mr. Tuttle were elected directors by this manufacturer of aerosol valves and containers, cosmetic containers, and metal components used in industrial and consumer products. The company's four plants are in Naugatuck, Danbury, and Waterbury.

Mr. Heileman is managing director of Risdon's Cosmetic and Aerosol Divisions, Mr. Noyack is managing director of the firm's Naugatuck and Waterbury plants, and Mr. Tuttle is sales manager of the Cosmetic and Aerosol Divisions. Mr. Baldridge is

(*Continued on Page* 68)

L. F. Heileman

American Home, Carter, Cited in Anti-Trust Action

CARTER Products, Inc., and American Home Products Corp., both of New York, have been charged by the Justice Department with violating the anti-trust laws by conspiring to set prices and monopolize trade in mild tranquilizers. Carter is the developer of "Rise" shaving cream, probably the largest selling aerosol shave cream on the market, and American Home Products, through its Boyle-Midway Division, is also a major aerosol marketer, mainly insecticides and household products.

The civil antitrust action, filed in the New York Federal District Court, came just after Senator Estes Kefauver, chairman of the Senate Antitrust Subcommittee investigating drug prices, had accused both firms of submitting identical bids on tranquilizers to the Government. Officials of both Carter Products and American Home Products denied the charges.

Specifically, the complaint charges Carter and American Home Products with agreeing to exclude others from making tranquilizers with meprobamate as the sole active ingredient; agreeing to fix prices for the tranquilizers; and restricting the use of meprobamate in the manufacture of other drugs. These factors, the Justice Department claimed, have forced the public to pay artificially high prices for the drugs, have curtailed development of new drugs in which meprobamate might be an ingredient, and have generally eliminated competition in the sale of mild tranquilizers. Carter holds the patent on meprobamate, and sells about one-third of the entire mild tranquilizer market. American Home Products has the remaining two-thirds of the market.

Packaging Awards Open

Entries are now open for the 1960 Annual Awards of the Packaging Institute for outstanding contributions to packaging technology. Complete details and entry forms may be obtained from the office of the Packaging Institute, 342 Madison Ave., New York 17, N. Y.

The Corporate Award of the Packaging Institute is given annually "in recognition of an outstanding advance in applied packaging technology to the company which has commercially integrated packaging materials, equipment and methods in the packaging of their product." Ethicon, Inc., a subsidiary of Johnson & Johnson, was recipient of the 1959 Corporate Award for a surgical suture package developed over almost a decade of research for use with electron beam sterilization.

The Professional Award is presented annually to the individual who, "because of his preeminence in, and contribution to, the field of technology is deemed worthy of special recognition." The 1959 Award winner was Dr. Frank C. Campins, president of Polymer Industries, a subsidiary of Philip Morris, Inc., who was given this recognition for his many years of valued guidance while participating in the work of the Institute's technical committee and various other activities.

Deadline for submission of nominations is May 15. The selections are made by a jury chosen from the packaging and allied fields. Their names are not made public and they are unknown to each other, since the jury's balloting is conducted by mail. The annual awards are presented each year at the National Packaging Forum of the Packaging Institute. They will take place this year at the annual awards dinner, Nov. 1, at the Statler-Hilton Hotel, New York.

Any corporation in the United States which performs a packaging operation, and any professional packaging man, are eligible for the awards, whether or not they are members of the Packaging Institute.

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National Labs Appoints Two

National Laboratories, Inc., Toledo, a subsidiary of Lehn & Fink Corp., last month named Norman W. Jennings vice president marketing and William A. Thompson general sales manager.

French Aerosol Assn. Meets

The Comite Francais des Aerosols (The French Aerosol Association) held its annual meeting at the Maison de la Chimie, Paris on Jan. 14. Chief speaker was Professor Quevauviller, professor of hygiene at the School of Pharmacy of the University of Paris, who spoke on "The Use of Chlor-fluoro-methanes as Cosmetic Propellants."

He reported on a two-month laboratory study, conducted with rats, to determine the relative skin toxicity of this type propellant.

Two other aerosol authorities, M. Daragan and M. Sfiras, also spoke. M. Daragan outlined a number of quality control procedures to insure quality production of aerosol products. M. Sfiras outlined some of the perfumery problems associated with aerosol formulation.

One part of the program was devoted to the viewing of three documentary films. The first of these was a consumer-directed film from Dupont illustrating the advantages of aerosol dispensing. The second was from Saint Gobain and showed automation in the glass container plant. The third, from Farbwerke Hoechst, explained the function of the aerosol and how the various propellants work.

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FDA, FTC to Step Up Work

If Congress approves unprecedented appropriation increases asked in President Eisenhower's 1961 budget message, the law enforcement activities of both the Food and Drug Administration and the Federal Trade Commission will be stepped up. Included in the 1961 Federal budget is a record FDA appropriation of $18,241,000, plus an additional fund of $23,840,000 for the General Services Administration to construct a new Washington building for the FDA. The FTC appropriation is expected to be raised to $7.6 million, an increase of $760,000 over the 1960 appropriation.

Skin Subject at N. Y. SCC

The New York Chapter of the ciety of Cosmetic Chemists last m... heard two speakers present current work on histology and "in vitro" maintenance of skin. The talks were given at the February 3 meeting of the Chapter.

Dr. Moire Bradshaw, of the Isaac Albert Institute — Jewish Chroni Diseases Hospital, Brooklyn, discussed a technique for determining the extent of percutaneous absorption of lipids through normal skin, as demonstrated by a fat soluble dye—Sudan Black B. Biopsies of skin to which the dye in lipids was applied were prepared for histologic studies and the presence of the black dye taken as the measure of lipid penetration. Dr. Bradshaw's color slides demonstrated the superiority of cryostatic sections over gelatin sections for this type of work. She further pointed out that animal studies are *not* applicable to human skin due to the difference in enzymes and skin structure.

The second paper, by Angelica Findley and Ronald Gillette, described work on homotransplantation of human and animal tissue at The New York Hospital—Cornell Medical Center. Two salient limiting factors in maintaining organic cultures of skin are: (1) supplying adequate nourishment and (2) preventing dedifferentiation to embryonic form. Thin sections of skin were "floated" on a complex nutrient medium for optimum diffusion.

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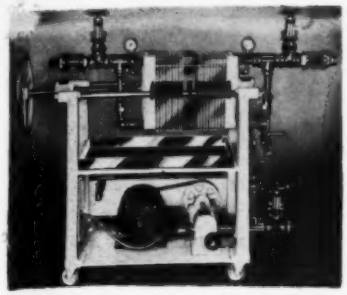
Sonneborn Changes Co. Name

L. Sonneborn Sons, Inc., New York, petroleum refiner and manufacturer of chemical specialties, last month changed its name to Sonneborn Chemical and Refining Corp.

In petroleum refining, Sonneborn specializes in medicinal, cosmetic and technical white oils, medicinal and technical petrolatums, petroleum sulfonates, petroleum waxes, and Pennsylvania motor oils and lubricants. These are produced in the company's refineries at Petrolia and Franklin, Pa. Sonneborn also operates a plant in Belleville, N. J.

...tel Unveils Duplex Filter



The Ertel Engineering Corp., Kingston, N. Y., has announced the addition of a new duplex filter to its line of liquid handling equipment. This new filter, designated as the "EFS Duplex Model," will permit single filtration or double filtration in one operation. It is expected to find use for liquids which require both primary and polishing filtration as well as those requiring a single pass. It is available with either standard or sludge type inlet frames.

A special feature is the absence of rubber washers or gaskets. The filter medium forms a seal around the edges of the filter frames and prevents loss of liquid. The unit can be furnished with or without pump, motor and pressure control, and also can be equipped with an Ertel stone fibre eliminator for pyrogen work

The model is available in a number of sizes holding from 10 to 100 12" x 12" filtering surfaces. Liquid contact parts can be either stainless steel, or nickle plated bronze.

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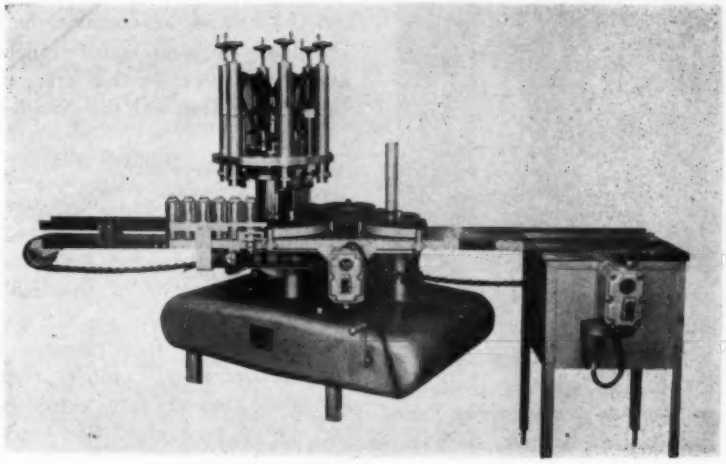
New Ketone Booklet

A new 48-page booklet describing ketones as solvents and chemical intermediates has been published by Union Carbide Chemicals Co., division of Union Carbide Corp., New York.

The booklet has up-dated data on 15 ketones and diketones that are available in commercial quantities from Carbide. It includes information on applications, coatings, formulations, physical properties, solvent properties, constant-boiling mixtures, shipping, storage, handling, physiological properties, specification limits, and test methods. A comprehensive bibliography on ketones and their uses is one feature of the booklet.

Equipment— Processes— Bulletins—

Kartridge Pak Introduces New Rotary Aerosol Fillers



Two new rotary aerosol units will be unveiled at the National Packaging Exposition on April 4 in Atlantic City, N. J., it was reported last month by The Kartridg Pak Co., Franklin Park, Ill. The new rotary units are a combination pressure filler and vacuum crimper, and a combination pressure filler and tip applicator. Both are said to be capable of production speeds in excess of 100 per minute.

The vacuum crimper functions so that unless a vacuum can be drawn on the container, the crimping head will not operate. This prevents any attempt to close a can on which the valve does not seat properly. Pressure filling is accomplished in the remaining part of the rotation cycle.

The tip applicator does an operation normally done by hand.

Offers Sanitizer Formulations

A descriptive booklet on use of its "Vancide BN," bactericide-fungicide as a sanitizing agent has been issued by the Specialties Department of R. T. Vanderbilt Co., 230 Park Ave., New York 17. Principal reason for possible widespread use of sterilizing and disinfecting materials, the booklet contends, is to provide additional protection against growing resident populations of antibiotic strains of bacteria.

Included are aerosol formulations and packaging procedures for aerosol rug and upholstery cleaner, liquid tile cleaner, and porcelain cleaner and polish. Also in the booklet is detailed data on bacteriological tests conducted with "Vancide BN" which indicate a high percentage of bacteriostatic reduction. "Vancide BN" is Vanderbilt's name for disodium 2,2 thiobis (4,6 dichlorophenoxide), a water-soluble, fine crystalline powder.

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Bottom-Up Filling Unit

A special filling attachment which adapts its "Filamatic" portable filling machines to foaming liquids has been announced by National Instrument Co., 2701 Rockwood Ave., Baltimore. With the bottom-up attachment, filling nozzles are lowered into the containers and then raised as the liquid level rises in the container. This is said to minimize foaming action and permit faster fitting speeds. Nozzles can be adjusted to either remain under the surface of the liquid or just over the surface during fill cycle.

Uncoated Glass Container

A new un-coated glass bottle with intricate convolutes and available with a micro-valve has just been introduced by Par Industries, Inc., Los Angeles custom aerosol filler, and Old Empire, Inc., Newark, N. J. Old Empire will offer the container in the East and Par will make the bottle available to the cosmetic industry in the 13 western states.

Sylvan Lefcoe, president of Par Industries, said: "This unique un-coated glass bottle being offered to marketers of cosmetics may be the start of a mushrooming market for un-coated glass containers in this country. We expect to introduce several other designs in 1960."

Jointly developed by Par Industries and Old Empire, the container holds 1½ ounces of liquid, and is available with several overcaps that cover the valve and fit flush with the shoulders.

New PFW Flavor List

Polak's Frutal Works, Middletown, N. Y., manufacturers of perfumes and flavoring materials, has just issued a new 32-page flavor list. Included is information pertaining to the manufacture of such food products as syrups, liquers and cordials, icings, and others presently being considered for aerosol packaging. One special section discusses some of the problems of flavoring a wide range of pharmaceuticals, including vitamins and cough syrups.

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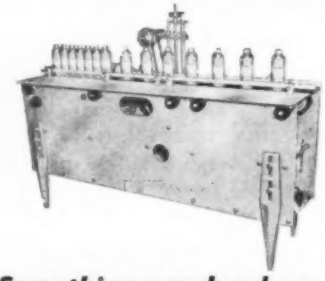

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For automatic code dating of concave bottoms of aerosol cans.
Will mark top, bottom, or both at the same time.

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with Kiwi built-in rubber band type.
- No loose type to become lost
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- Prints in the same place on every case

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High Speed Extrusion Press

Aluminum beer cans are being produced at speeds of up to 120 per minute through use of a new high-speed extrusion press developed by Aluminum International, Inc., Denver. This development could have some effect on the aluminum aerosol container situation, since it almost doubles the production speed for standard aluminum cans.

The press employs a continuous strip-casting method developed by Aluminum International. The new machine uses a redesigned press drive and an eccentric crank action for higher impact feed. The press is currently being used by E. W. Bliss Co., Canton, Ohio, to turn out aluminum beer cans in the 11-ounce size.

•

Onyx Issues Surfactant Catalog

A new 24-page catalog of surface active agents has been published by the Onyx Oil & Chemical Co., Jersey City 2, N. J. Each product is described by trade name, active ingredient, percent activity, physical state, general use, specific applications and properties.

The products are divided into three general classes: anionic, cationic and non-ionic. There is a 2 page section explaining the chemistry of each of these groups.

Copies of this catalog are available by writing directly to the company.

•

Aromatic Prod. Lab Scents

"Amalia," a new floral bouquet designed especially for cosmetic and chemical specialty applications, has been developed by Aromatic Products, Inc., 235 Fourth Ave., New York 3. Suggested percentages for aerosols are one-quarter to one-half of 1%. Samples are available on request.

Also announced by Aromatic Products was "Diascent," a new odor masking agent for use in Diazinon formulations.

•

Durazone Introduces New Line

Durazone (Sales) Ltd., London N.3, England, recently introduced a new line of aerosol products, mainly of the disinfectant-deodorant type.

Flavor Restoration Process Developed by Evans Research

A NOVEL flavor enzyme process to enhance the natural fresh flavor of processed foods, termed a "major breakthrough in food flavor research," was disclosed last month by Evans Research and Development Corp., New York research agency. Announcement was made at the same time that the company was granted U. S. Patent No. 2,924,521 after extensive food research carried out by Drs. Eric J. Hewitt, Donald A. M. Mackay, and Kurt S. Konigsbacher, of Evans Research, and Dr. Torsten Hasselstrom of the Army Quartermaster Research and Engineering Command.

The invention is based on the concept that fresh flavor is produced by the catalytic action of specific enzymes on chemical compounds in natural foods called flavor precursors. The usual methods of processing inactivate substantially all the enzymes including those responsible for flavor. However, the flavor precursors are more stable, and ordinarily survive processing. If the specific enzymes are restored, the flavor precursors regenerate fresh flavor. These flavor enzymes are obtained from the fresh food or biologically related materials. The source may even be waste products such as bruised or overripe fruit, or inedible parts such as stalks, leaves, or skin. The flavor produced by the action of these enzymes is akin to the characteristic taste and odor of natural fresh flavor.

Evans Research points out that the specific utilization of the flavor enzymes will vary according to the food and type of processing. One commercial application suggested might be in the actual processing of the food, another in packaging, and still another as a powder that may be sprinkled on the food before serving. Although Evans Research did not specify how the development might be used for pressurized foods, it was suggested that it works especially well in bananas, horseradish, and dairy-type products (all of which have been contemplated for aerosol packages).

Evans Research spokesmen said that licenses will be made available to commercial organizations to enable them to utilize the invention. They indicated that Evans Research is currently engaged in commercial development studies of the process.

•

Colton Offers Catalog

A new eight-page, catalog describing Colton, Colton-Hope, and Colton-Alpha filling equipment for the aerosol, pharmaceutical, chemical, cosmetic, paint, and food industries is now available from Arthur Colton Co., 3400 E. Lafayette, Detroit.

Equipment described includes automatic metal and plastic tube fillers, closers and crimpers for pastes, creams and liquids; single, twin and multiple liquid fillers; and single-operation fillers, closers and crimpers.

Colton Hope-fillers, illustrated include multiple, automatic conveyorized, volumetric-fill types; single and twin straight-line models; can coders; rotary unscramblers; semi-automatic fillers and container infeed timing screws.

Colton-Alpha aerosol filling machines having single-operation, rotary and straight-line designs are also described and illustrated in the catalog.

•

Givaudan Adds to Magazine

The ever-increasing utilization of the newer methods of analysis of aromatic materials and the continued improvement in analytical technology has prompted Givaudan-Delawanna, Inc., New York, to devote a new section in its house magazine. *The Givaudanian*, to this all-important subject. The new section, titled "The Analyst's View," will be introduced in the February 1960 issue and appear periodically thereafter. Written by V. D. Johnson, director of the analytical laboratory at Givaudan's Delawanna plant, "The Analyst's View" will highlight specific aspects of analysis of interest to those concerned with the chemical analysis of perfumery materials.

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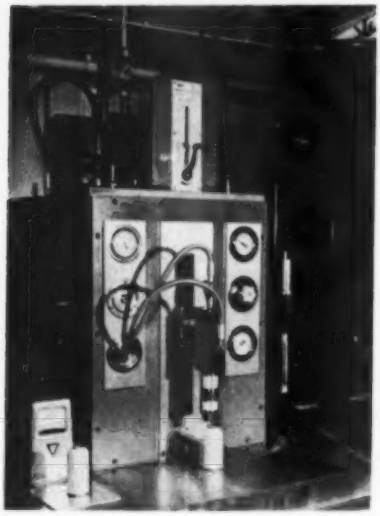
Offer New Propellant Charger



A new model propellant charger which is said to offer increased production and lower operating costs has been introduced by Druk-Pak AG, 36 Merkurstrasse, Zurich, Switzerland. Called the "WM-DP-340/A," the unit will operate at between 25 and 30 cans per minute charging 100 grams. Operation is fully pneumatic and there are no foot pedals, finger buttons, or electrical connections. Filling head is easily removable and a built-in cut-off valve closes propellant line when head is removed. The filling head position is readily adjustable. For automatic line operation, charger can be synchronized with ingredient filler and valve clincher. Compressed air impulse valves control all operations.

•

PI to Revise Glossary

Planning has begun for revision and updating of the Packaging Institute's "Glossary of Packaging Terms" and publication of the third edition of this basic reference for the packaging industry. The enlarged edition will contain more than 125 new definitions submitted by the U. S. Government services plus a large number which have been collected since publication of the second edition in 1955, and many more expected to be accumulated by the Glossary Revision Committee.

Members of the group include Gerry O. Manypenny, editor-in-chief of *Food & Drug Packaging*, who edited and compiled the first edition; and N. W. Postweiler, Riegel Paper Corp. Charles A. Lewis, director, and Charles Felton, of the Containers and Packaging Division of the U. S. Commerce Department, have been providing assistance in co-ordinating the revision work with the Federal Government agencies.

•

Hoechst Issues Aerosol Film

Farbwerke Hoechst of Frankfort-M.-Hoechst, Germany, one of Europe's largest producers of fluorinated hydrocarbon aerosol propellants, has released a new color slide film with sound track, designed to assist retail outlets in their sales of aerosol packaged products. The film takes up questions most commonly asked by prospective customers about use, application, and effectiveness of various kinds of aerosols and supplies the answers for druggists and sales personnel in a 15 minute concentrated review. Essentially a sales training film, it nevertheless can be effectively used for schools, meetings and conferences. The sound track is available in a number of languages which should permit its wide use throughout European countries, including England.

The company's propellants, marketed under the trade name "Frigen," are widely used throughout Europe. Farbwerke Hoechst was one of the pioneers in European aerosol development. At Hoechst, near Frankfort, where its plant is located, it maintains one of the most complete aerosol laboratories on the Continent. All services of the laboratory, as well as the new film, are available to anyone interested in pressure-packaged products. Together with the film, the company provides an automatic projector with loud-speaker and screen. At any point the projection can be halted for explanation and discussion, making its use ideal for salesmen's training. Inquiries about the film and projection apparatus should be addressed to: Farbwerge Hoechst, Frigen Department, Frankfort/M.-Hoechst, Germany.

Nalbach Unveils Gasser-Shaker

A new semi-automatic gasser-shaker, called the "Model GS," has been developed by John R. Nalbach Engineering Co., 6139 W. Ogden Ave., Chicago 50. The gassing head is raised by positioning the operating lever and the cans are simultaneously positioned and discharged by manual movement of the can transfer slide. The gassing head is clamped manually and the machine shakes two rows of four filled and crimped aerosol containers during the time the propellant is introduced into each container.

Nalbach reports that the unit will operate at 1,800 containers per hour, depending on shake time (which is adjustable from 0 to 30 seconds). All exposed parts are non-corrosive, and manifold and valve assemblies are removable for cleaning. A special interlock prevents shaking unless the cans are clamped securely.

•

French Plan Machinery Show

The French Packaging Institute last month announced that "Autopac," the First International Packaging Machinery Show, will be held in Paris from Oct. 14 to 23. The machinery show will be held in conjunction with the 14th French Packaging Show, which last year drew 200,000 visitors during a ten-day period.

•

Oppenheim to Marcy Post

Charles J. Oppenheim III has been named executive vice-president of Parfums Marcy, Inc., New York, U.S. distributor of "Replique" and "Plaisir" perfumes and other Raphael products. He was formerly director of information services for CBS Television.

Stalfort Installs Liquid Line

A high-speed, versatile liquid-fill line, capable of handling soaps, shampoos, hair tonics, cologne, liquid solvents and household chemicals, waxes, polishes, hydraulic brake fluids and insecticides and others has gone into operation at the Hammonds Ferry Road plant of the John C. Stalfort & Sons Inc., Baltimore.

Used in conjunction with two new 5,200 gallon stainless steel sanitary tanks equipped with lightning-type agitators and recirculators, the new line is said to provide quick service at much reduced cost. The tanks can be used for storage, to take a customer's basic ingredients and mix them with locally purchased bulk materials (thereby saving initial shipping costs) or to process the materials according to the customer's own formula in the plant.

Operating under normal conditions and with fast-flowing material the line can clean, fill, cap and label containers (bottle, jar or can) at the rate of 15,000 an hour. Its 32-head rotary filler works with gravity, pressure-gravity and pressure. An important part of the line is the $35,000 electronic World Super C.M. labeler.

With its chemical specialties division at the Pratt Street plant and the aerosol loader lines and high-speed liquid fill line at Hammonds Ferry Road, the John C. Stalfort & Sons organization believes that its organization may be the largest contract packager in the U. S.

•

Collapsible Tubes Gain

Two areas of competition between aerosols and collapsible tubes, toothpaste and shaving cream, registered sharp changes last year, reported the Collapsible Tube Manufacturers Council in announcing total production figures for 1959. A record-breaking 1.15 billion collapsible metal tubes were sold in 1959, an increase of 14% over the 1958 sales.

Of this figure, toothpaste manufacturers accounted for 581 million of the units produced in 1959, an increase of 13% over '58 production of 513 million. Greatest total gain of any product type in collapsible metal tubes was cosmetics, which accounted for 104 million units, an increase of 33% over the 1958 total.

The largest reduction among product types was for shaving cream, a category that has suffered heavy inroads by pressurized packaging. Shaving cream tubes dropped to 39 million, a 9% loss from '58 production of 43 million.

•

New Aerosol Cap Maker

Standard Cap and Molding Co., Baltimore, last month began operations at a new plant in Hillside, Ill. Aerosol overcaps produced in the new plant will be distributed in the Midwest by the Walter Frank Organization, also in Hillside.

Operation of the firm's Midwest plant will be under the supervision of Chester Kotecki, former plant manager for the Plastic Molded Products Co., Chicago. Initial installation consists of four completely automatic Lester-Phoenix presses.

Oral Dosage Panel Subject

"Oral Sustained Action Medication" will be the subject of a panel discussion at the Congress for Pharmacists, a one-day technical session presented at St. John's University's College of Pharmacy, Jamaica, L. I., on March 17. Oral medication is a pharmaceutical area in which considerable work has been done with aerosols.

Speakers include authorities from Smith, Kline and French Laboratories, Philadelphia, and the Canadian and U.S. Governments:

Design and Study of Oral Sustained Action Dosage Forms, by Dr. Joseph V. Swintosky, (Smith, Kline & French).

Methods of Obtaining a Sustained Action in Oral Dosage Forms, by Manford J. Robinson (Smith, Kline & French).

In vitro and in vivo Evaluation of Release Rates of Sustained Action Dosage Forms, by Dr. J. A. Campbell, chief of the Vitamins and Nutrition Section, Dept. of National Health and Welfare, Ottawa.

Testing Methods for Determining Release Rates of Sustained Action Dosage Forms, by Dr. Earl L. Meyers, chief chemist, New Drug Branch, Bureau of Medicine, FDA.

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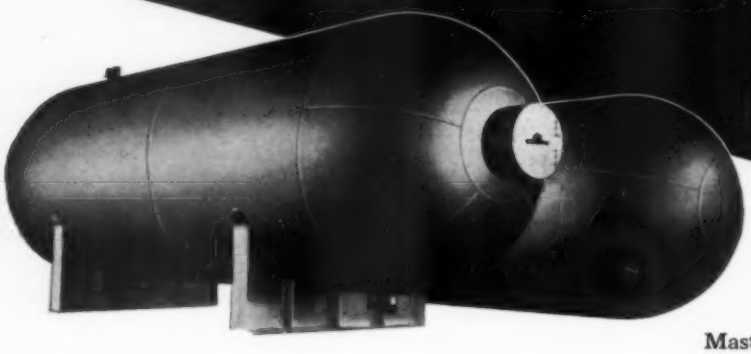

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Paris Rebuffs Outer Seven

The European Free Trade Association, called the "Outer Seven," last month was refused permission to establish its permanent secretariat in Paris. In a move interpreted as a political rebuff aimed mainly at Britain, the French Government told the Outer Seven it did not consider its proposal to set up headquarters in Paris as "opportune."

The proposal to establish Paris headquarters was regarded as a step toward breaking down the rivalry between the European Common Market, of which France is a leading member, and the European Free Trade Association, of which Britain is regarded as the strongest member. The sharpness of the French rebuff is said to have caused concern among the other Common Market members (West Germany, Italy, Belgium, the Netherlands, and Luxemburg), most of whom have traditional trading ties with Britain. France has steadily resisted any weakening of the barrier between the two "free" trading blocs in the fear that Britain's eventual goal is to retard development of The Common Market.

These developments were being watched closely by major U.S. aerosol marketers, by valve manufacturers, and by machinery manufacturers, many of whom have become increasingly interested in selling products or components to the European aerosol market.

At month's end, senior officials of the European Trade Association turned their attention to Geneva as prospective headquarters. In a communique issued Feb. 15, officials of the seven nations in the association agreed to recommend the Swiss city to their governments, a recommendation interpreted as tantamount to selection of Geneva as headquarters city. Switzerland, incidentally, *is* a member of the association.

On July 1, the "Outer Seven" members will cut tariffs for each other's industrial goods by 20%. Britain, Sweden, Norway, Denmark, Portugal, Austria, and Switzerland are the members of the "Outer Seven."

The Common Market countries—France, West Germany, Italy, Belgium, The Netherlands, and Luxembourg — have already cut tariffs against each other by 1% and will reduce them another 10% on July 1.

•

Givaudan Moves LA Office

The Los Angeles office of Givaudan-Delawanna, Inc., and its associate companies, Givaudan Flavors, Inc., and Sindar Corp. moved to new quarters on February 8. The new office is located at Suite #3, 6022 West Pico Boulevard, Los Angeles 35. The phone number at the new office will be WEbster 9-3101.

•

Chicago SCC to Hear Dressler

The March 8 meeting of the Chicago Chapter of the Society of Cosmetic Chemists will hear an address on "What Can be Patened" by Max Dressler, a patent attorney with many years of experience in the chemical and cosmetic fields. The meeting will be held at Henrici's Restaurant in the Merchandise Mart.

Aerosols at Glycerine Show

A group of aerosol products were among those displayed at New York's Waldorf-Astoria Hotel on Jan. 20, at Soap & Glycerine Producers' Assn. meeting.

•

Millot Moves Headquarters

Parfums Millot, aerosol toilet goods marketer, last month moved to larger quarters in the Squibb Building, 745 Fifth Ave., New York.

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• Screw on Tops
• Gauge Attachments
• Can Piercers
• Hand Pressure Testers
• Oven for Shelf Life Ttests
• Hot Water Bath
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• Sampling Cylinder for Compressed Liquids
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New Risdon Officers

(*From Page* 58)

vice-president of the Eastern Malleable Iron Co., of Naugatuck.

Risdon's new executive vice president has been with the company for 14 years, serving as a management trainee, an inter-plant engineer and assistant factory manager before becoming administrative vice-president in 1956 and vice-president last year. He is a graduate of Yale's Sheffield Scientific School.

Mr. Heileman, who has been with Risdon for 24 years, joined the company in 1935, two years after his graduation from the U. S. Naval Academy at Annapolis. Before becoming factory manager of the Danbury plants, Mr. Heileman also had been factory superintendent there, ordnance engineer, assistant sales manager and member of the sales department. He was named managing director of the Cosmetic and Aerosol Divisions last July.

Donald S. Tuttle, Jr.

Mr. Noyack, who also is a member of Risdon's board of directors, has been with the company since 1920 in various capacities, including factory manager, factory superintendent and assistant factory superintendent. Engaged actively in engineering as well as in manufacturing, he has received more than ten patents covering original developments in the metal fabrication field. He was appointed managing director of the Naugatuck and Waterbury plants in July, 1959.

Mr. Tuttle joined Risdon in 1946 after World War II service as a Marine dive bomber pilot. He was appointed assistant to the sales manager of the firm's Wire Specialties Division in 1948. When the Valve Division, predecessor of Risdon's Aerosol Division was formed in 1952, he became its sales manager. The Cosmetic Division was added to his responsibility in July, 1959.

•

Revlon Purchases Pinex Co.

Revlon, Inc., New York, last month announced the purchase of Pinex Co., Fort Wayne, Ind., and Pinex Co. Canada, which has its headquarters in Toronto. Both companies manufacture and distribute Pinex cough syrup, Dexyl Anti-Tussive cough tablets, Pabasone arthritis-rheumatism tablets and Piso cough syrup.

The two newly-acquired corporations will be integrated into the operations of Revlon's wholly-owned Thayer Laboratories, which was established for the development and manufacture of proprietary drugs.

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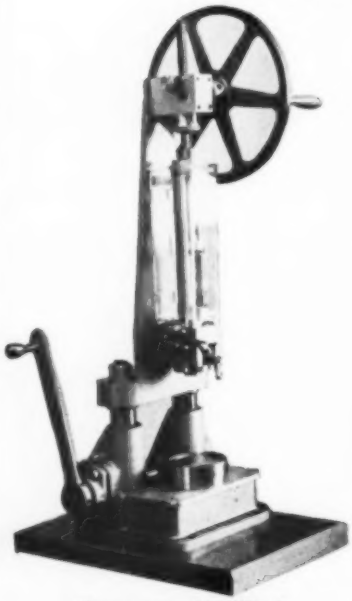

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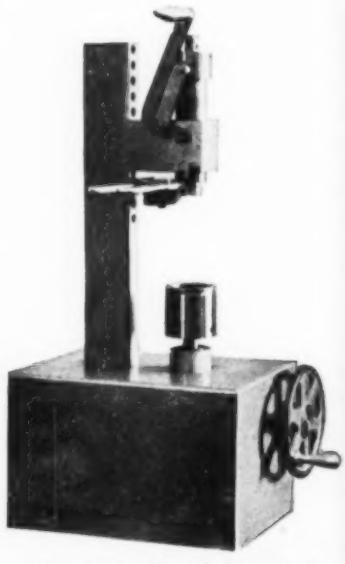

Foresman Hand Operated Vial Capper

Wood Addresses L. A. SCC

The relative danger of hitherto harmless cosmetics is increased by use of new and efficient wetting agents which make for more rapid absorption through the skin barrier. This warning was voiced by Gordon R. Wood, chief of the Food and Drug Administration's Los Angeles District, in an address to the Los Angeles Chapter of the Society of Cosmetic Chemists.

Mr. Wood was chief speaker at the chapter's first meeting of 1960, at which Pete Clapp, vice president of

Pete Clapp, Gordon Wood and Oscar Scherr.

Western Filling Corp., was installed as 1960 chairman. Other officers named for this year were Oscar Scherr, chairman elect; Harry Mace, secretary; and Ben Kapp, treasurer.

The major portion of Mr. Wood's address was devoted to outlining the functions and jurisdiction of the FDA, which he explained is concerned with the misbranding and adulteration of foods, drugs, and cosmetics shipped in interstate commerce. It has, he said, no control over advertising or the practice of medicine. Any cosmetic which is dangerous, dirty, or contains an uncertified dye is considered adulterated. Failure to include the manufacturer's name, quantity of material, or the use of fantastic claims or misleading containers, he said, constitute misbranding.

•

Polak Heads Perfumers Group

Bernard Polak, of Polak's Frutal Works, has been elected president of the American Society of Perfumers at the society's annual business meeting in January. The other officers elected were William H. Barlow, Orbis Products, Inc., first vice president; Herbert Sommer, Prince Matchabelli, second vice president; Mrs. Dorothy A. Douglass, Shulton, Inc., secretary; and Edwin D. Morgan, Jr., Lever Brothers Co., treasurer.

•

Guterma Given Four Years

Alexander L. Guterma, a former top executive of the Bon Ami Co. and the Scranton Corp., last month was sentenced to four years and eleven months in prison and fined $160,000. He and another defendant, Robert J. Eveleigh, had been found guilty on Jan. 27 of conspiring to defraud the Government by wilfully failing to file necessary reports with the Securities and Exchange Commission and the New York Stock Exchange. The violations occurred between 1956 and 1958, when Mr. Guterma controlled the F. L. Jacobs Co., a holding corporation, and Mr. Eveleigh was vice president.

It was during Mr. Guterma's administration of the Scranton Corp. in 1958 that that company formed an Aerosol Packaging Division and purchased the filling equipment of the Bridgeport Brass Co. However in less than a year the company was forced to file for bankruptcy, and ceased all of its aerosol activities.

Mr. Guterma was born in Eastern Siberia in 1915, and prior to coming to the U. S. in 1950 was involved in a variety of financial dealings in Shanghai, Tientsin, Tsingtao, Harbin, and Manila. According to Jerome G. Londin, executive assistant United States attorney, in 1935 Mr. Guterma served a six months' term for misappropriation of funds in Tientsin and did business with the Japanese in the Philippines during their occupation of that country.

In the U. S. he built a shaky financial empire that included controlling interests in Bon Ami, United Dye & Chemical, Mutual Broadcasting System, United Hotels Corp., F. L. Jacobs Co., and Hal Roach Studios. He was arrested in February of last year when the S.E.C. accused him of failing to file proper financial reports. The Government contends that at least $919,000 of funds from the F. L. Jacobs Co. found their way into his pocket.

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CSMA Adopts Specifications for Aerosol Cans

The Chemical Specialties Manufacturers Association, New York, last month announced details of its specifications for aerosol cans, which were approved in a resolution at the association's 45th annual meeting in Washington. All three of the major can producers have notified that they are in compliance with the standard.

Dimensions	202 *Diameter*	211 *Diameter*
A. Inside diameter of 1" cup opening	202 x 214	211 x 407.5
B. Outside diameter of 1" cup opening	202 x 314	211 x 413
C. Height of curl opening above double seam	202 x 406	211 x 510
D. Height over double seam	202 x 509	211 x 604
F. Height between double seams		

Dimensions	202 *Diameter*	211 *Diameter*	*Tolerance*
A.	1.000	1.000	plus/minus .004
B.	1.226	1.226	plus/minus .010
C.	.396	.798	plus/minus .016
D.	Sales Code Height (Example: 314 or 3.875" —.010 —3.865)	.010	plus/minus .031
E.	Item C plus Item D		plus/minus .047
F.	Sales Code Height	.300	Minimum

MacDonald to PR Post

Robert J. MacDonald has joined Norman Odell Associates, New York public relations firm, as an account executive. Mr. MacDonald was formerly an account executive with Gaynor & Ducas, Inc., and before that was Publicity Manager with American Machine & Foundry Co.

Odell Associates recently moved its offices to 122 East 42nd Street (Chanin Building), New York City. The agency handles the publicity for the Aerosol Division of the CSMA.

Television Advertising

(*From Page* 22)

and advertising as both have suffered so far. The advertisement was regarded by those close to the Commission as a commentary on 'the real values of Madison Avenue.'"

The Bates advertisement contended that real sandpaper *could* have been shaved, but that substitution of plexiglass and sand was necessary because "shaved and unshaved sandpaper do not register properly through a television lens." Maintaining that use of such props is no more deceptive than use of make-up for television performers, the advertisement charged that "Stripped of legalistic verbiage, these crippling indictments rest on flimsy ground indeed—mere subjective opinion that minor props and artifices have resulted in horrendous deceits."

Reaction to the advertisement was mixed on Madison Avenue—some contending that Bates had made a bad tactical blunder and others that it had displayed rare courage to speak out in the way it did to a powerful government agency. Advertising executives generally seemed to be keeping an apprehensive eye on Washington for further reaction from the Government.★

Aerosol Movie Device

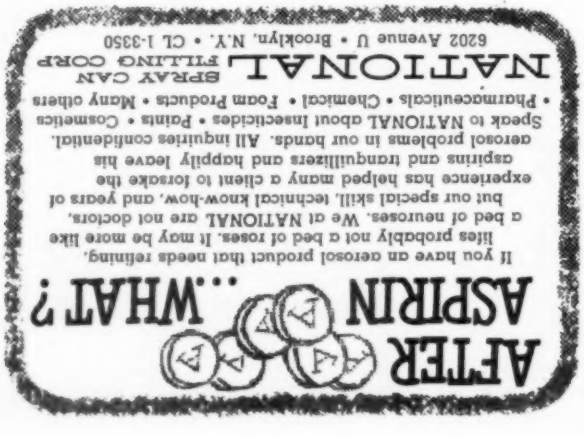
(*From Page* 29)

ensuing arguments, the picture doesn't always come first. For instance, there is a sensational scene of a tiger about to kill and consume a poor tethered goat. The odor of tiger does not remind this zoo-ridden observer of any tiger he ever approached, or of any cat at all. There was smoke, and creosote again. When a river was bombarded to break up the ice, the smell of gunpowder was far from the remembered Fourth-of-July odor, or that of dynamiting in the subway, both of which can never be forgotten. When we got to nomads in the desert, an odoriferous group according to world travellers and connoisseurs of smell, there wasn't even a good strong impression of working horses.

"The great green outdoors upon one occasion came through as celery tonic. There were half a dozen other smells I never caught at all, though I was sniffing so incessantly I almost got oxygen poisoning.

"This much must be conceded: it makes a wonderful test of the nose, which is followed by great contention for one's individual sensory faculties. One person is suggestible; another is not. One sticks up for his own finer senses; another is stuck with his own deficiencies.

". . . Viewed as an extension of art, AromaRama continues and expands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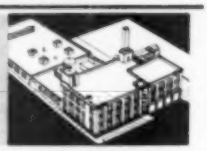

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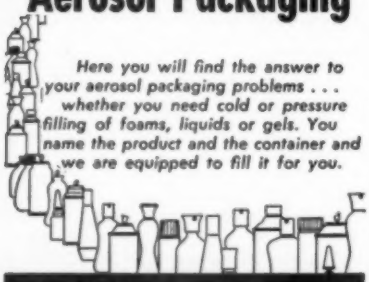

POWR-PAK, INC.
145 Howard Ave., Bridgeport, Conn.

the assault of modern times upon the senses. Ideally you have the impression of being surrounded, overwhelmed when the scent strikes you as right. When it's wrong, half-wrong or unimpressive, it can be a distraction. Besides, how many of your senses can you pay attention to at once? There *is* such a thing as counter-irritation, or not being able to see the forest for the trees. The blessing is partly there, but at best it's going to be a mixed one. Presently a good novelty, the future of which is doubtful in terms of reality. As air conditioning though, of the less literal sort, it might suggest some subtler uses."

This skepticism, also suggested in the *New York Times*, *Time* magazine, and by Rose Pelswick in the *New York Journal-American*, seemed to predominate among the erudite film critics of New York. Despite this, early audience reaction seemed to be good and at last report the company is going ahead with plans to convert theaters in other major cities to introduce the "AromaRama" process.

In the meantime, late in February a similar principle, called "Smell-O-Vision," was introduced by Mike Todd, Jr. for his picture "Scent of Mystery." This device works with pure scents dispensed with compressed air, rather than with fluorinated hydrocarbons. Also, each seat is equipped with a separate vent to better control the introduction of odors into the air.★

Consultant's Corner

(*From Page* 40)

gassing with a soluble gas would improve most of them beyond measure.

Although emulsion technology is recognized by all food chemists as the key to many end products, success is not nearly so simple as I may make it sound. However, it is still possible that rigorous application of the line of reasoning outlined here can bring a number of products now floundering in the laboratories out onto the market where they belong.★

Sivy to Shulton Post

The appointment of George R. Sivy as sales promotion manager has been announced by Shulton, Inc., New York. He replaces Edmund Jackson who recently was named brand advertising manager.

Prior to joining Shulton, Mr. Sivy was assistant retail trade promotion manager at McKesson & Robbins. Before that he was with Snow Crop Marketers.

Aerosols in Review

(*From Page* 51)

gress to use their spurs, as Congressional mail swells. Every series of stories dealing with their activities begets others and all get more correspondence from the folks back home, so the thing snowballs. The end is not in sight, and those who tend to regard it as a flash in the pan may be in for a sad surprise."

•

A DISCUSSION of aerosol household specialties, by Samuel Prussin, vice president of Aerosol Techniques, is included in the "First Documentary Edition of American Perfumer & Aromatics" issued last month. The publication includes five previously published documentaries —including one on aerosols—but only the section on household specialties is devoted to new articles.

Five product types—room deodorants, window cleaners, furniture polishes, oven cleaners, and rug and upholstery cleaners—are discussed in detail as to suggested formulations, manufacturing instructions, and general philosophy behind the formulation of each product type.

In the section devoted to room deodorants, Mr. Prussin points out that the large majority of such products of commercial import "contribute their desirable properties by means of covering the unwanted fragrance with a more desirable one. The more modern concept combines the fragrance aspect with a chemical deodorant. A true chemical deodorant which contributes no fragrance of its own is currently being evaluated. This ma-

terial is a complex, N-Soya N-ethyl morpholieneum ethosulphate. Chemicals such as formaldehyde and paraformaldehyde which anaesthetize the nerve extremities within the olfactory tract have fallen into disrepute."

He suggests the following formula and manufacturing instructions:

Component	*% Weight by Weight*
Triethylene Glycol	4.0
Propylene Glycol	4.0
Ethyl Alcohol Anhydrous	5.0
Hyamine 2389 50% Solution (Rohm & Haas)	1.0
Perfume	1.0
Prop 12/11 50/50	85.0

Manufacturing Instructions:

"Add and dissolve the Hyamine and perfume in the alcohol and then add and mix the glycols. This product is cold filled. The pressure at 70°F. is 35 psig. Glycols are generally used in room deodorant formulations since their existence as aerosol particles, presenting a tremendous surface area, dissolve the malodors before coalescing and dropping out. Triethylene glycol specifically in aerosol form is purported to be a spatial germicide. This action is usually potentiated by the incorporation of quaternary ammonium compounds. The alcohol is a necessary coupling agent effecting solution of the glycol, quaternary and perfume in the propellants. The use of ethyl alcohol is recommended over isopropyl alcohol because of the typical odor pungency which the latter contributes to the product. It should be pointed out that many essential oil houses specialize in suitable fragrances which are completely propellant-soluble. Generally a propellant mixture is used which will yield a true aerosol or air borne particle of the order of magnitude of 40 microns or less. Other deodorant materials, such as Metazene (Motomco, Inc.) and Meelium (Prentiss Drug & Chemical Co.) are also available and are currently used in aerosol products."

•

USE of a water aerosol to alleviate some of the effects of chronic bronchitis is reported in the Jan. 9 issue of *The Lancet*, British medical journal. The method was developed by Dr. K. N. V. Palmer, senior lecturer in medicine at the University of Aberdeen.

Specifically, the water aerosol was used to reduce the viscosity of the mucoid sputum in chronic bronchitis. The water was propelled by means of an oxygen nebulizer, and was administered as a fine "dry" mist with a particle size of 0.5 to 3.0 microns.

Of 20 patients tested, Dr. Palmer reports, there was a reduction in sputum viscosity in all 20 after inhalation of the water mist for one hour. "All the patients felt that the coughing was easier afterwards, and notable reduction in rhonchi was observed in many."

". . . Reduction in viscosity was greatest in those with the most viscid sputum, probably because the mucoprotein gel takes up water most avidly in this type of secretion. The treatment is non-irritant, is devoid of toxic effects, and is physiological in action."

•

THE scale upon which custom filling operations are conducted has a very material bearing upon production costs, points out an article on Aerosol Packaging Co., Bracknell, Berkshire, England, in the January issue of *Packaging*, leading British magazine in the field. "A large organization obviously is capable of planning for continuity of employment and full utilization of production capacity. This is important in view of the seasonal character of the demand for certain lines and the highly varied nature of the products handled."

The illustrated article reports that Aerosol Packaging's plant currently has five filling lines in "continuous use." Aerosol Packaging (formerly Safca Aerosol Manufacturing Co.) is said to have built the lines and filling equipment with its own engineering staff. Apart from supervision and quality control, the lines are said to be "almost entirely automatic." The article wisely points out: "Ultimately, the aim is full automation, but the flexibility which must be obtained on contract packaging militates against the high degree of specialization which full automation generally implies."

In one area, the article perhaps slightly exaggerates the role of the aerosol in the U. S.: "Although we in Britain have not reached the stage which has already been attained in the United States, where the customer complains if the product is offered in any other form than a push-button pack, expecting that any sprayable preparation will be so offered, at least as an alternative, we can reason-

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ably expect the market to develop along the same general lines. It is a fact that the effectiveness of most products which are pressure-packaged is increased, or that the pack offers some definite advantage to the user."★

Industry Safety Record

(*From Page 36*)

mersed, thus heating the contents of the can to 130°F. to permit checking for leakage, distortion, or other signs of danger. All defective units are removed from the line and scrapped.

At Western Filling the water bath is actually run at 145 to 150°F., to make sure the contents easily reach 130°. It has been determined that the actual pressure developed in the container is almost equal to the vapor pressure of the formula at our water bath temperature. This is due to a lag in contents temperature because of the thermal conductivity of the packaged liquid; thus the vapor phase and ingredients near the container wall are very close to the water bath temperature. It should perhaps be pointed out that there are a few products which cannot be heated to 130°, because this temperature would deleteriously affect the formula or active ingredients. Special exceptions are made in such cases and testing requirements may change to heating one unit out of each 500 produced, for example.

Every can is individually coded on the bottom with indelible ink, thus permitting us to trace any can to its exact origin. Samples are held by quality control for a period of one year, after which they are removed, retested and returned to stock. At our company the normal life expectancy of most non-food items is somewhere beyond five years. However, the bulk of the material is consumed within one year.

Because of procedures such as those outlined above, the aerosol industry, since its inception 11 years ago, has compiled a truly remarkable safety record and an even more phenomenal growth. Ten years ago there were about five million low pressure aerosols produced. The estimated production for 1959 is something in excess of one half billion. The total number of packages consumed so far is somewhere over two billion!

Early in the business the CSMA formed a special committee to compile and study all accidents which might befall the customer. But there were so few accidents to report that this committee, headed by John Brandenburg, of Standard Oil Co. of Indiana, was deactivated in 1953. Actually, there were 11 accidents that year, out of 135 million cans produced. CSMA made another compilation in 1957 and the figures were as follows: Statistics showed that there had been 733 million aerosols packed by the end of 1955 and it was estimated that one billion aerosols had been sold by the time this survey was made in 1957. Returns from industry represented a minimum of 461 million units, since several manufacturers did not report their totals as an exact number. In all, 65 accidents had accumulated over the nearly ten years and only 20 of these resulted in personal injury. The other 45 were limited to property damage. Not one accident was caused by flammability of the aerosol, nor did they result in fire! Comparison with other types of retail merchandise will show this to be a remarkable record.

The 20 personal injury accidents range all the way from minor frost bite to a claimed permanent facial disfigurement. The 45 property damage cases have gone all the way from the ridiculous to the serious. In one case, an avid housewife, in her zeal to kill a fly, held the insecticide so close to a painted wall that the paint lifted off the wall because of the solvent action of the aerosol ingredients. Another time, a young boy took a paint aerosol from his father's shelf and sprayed the grand piano a shocking pink.

Cases of this type are usually settled for the cost of a can of paint for repairing damage, or even less; for after all, there is strong evidence to indicate *flagrant* misuse of the can's contents. From the standpoint of cost

perhaps the most serious are the several aerosols which have burst on the rear decks of overheated parked cars. With all the glass in this vicinity, this raises quite a bit of havoc with the car's appearance. Because of lack of compliance with label instructions, cases like these are usually settled for minor damages.

As is now well known by fire fighting experts, quite high temperatures are reached inside parked cars when windows are closed. I have heard of one instance where a hole was burned through a car's lining by a reflection of the sun's rays through the rear window. One company made some temperature recordings in closed autos and it was determined that local temperatures of hundreds of degrees can develop. Other instances of overheating aerosols come from placing them on stoves, radiators, or in display windows, though claims of this sort total insignificant amounts. One manufacturer reported that he had filled over 50 million aerosols and had a total claim settlement of only $200 for the entire production.

Several more serious claims have been made against aerosols, some of which have reached the headlines. In one instance, it was even alleged that death directly resulted from an aerosol. In this, as well as all other serious accusations, it was invariably shown conclusively that aerosols either had nothing at all to do with the accident or else they were incidental to the accident and received summary conviction due to circumstantial evidence. In every instance, the record has been set straight.

The record of the aerosol industry is good and we can be justly proud of it. Our insurers recognize this and there are only two industry members who do not consider their relations with their insurers as good or excellent. Only three industry members have a rating on their insurance other than the lowest applicable. All these insurance considerations apparently relate to public liability as well as fire and extended coverage. We feel that this insurance situation reflects the safety of the aerosol industry and confirms the industry's own surveys.

This brings to mind something that has always been a major concern to our industry. There is always the threat that some influential individual or group, motivated by non-aerosol interests, may take a cursory look at aerosols and decide to draft legislation which can be termed basically "unfair" to the aerosol industry. This course of action has been attempted in certain sections of the country; and had aerosol companies not taken action to show legislators some of the facts outlined above, and made suggestions to keep uniform labeling and other requirements for aerosols, we would be faced with a veritable jungle of conflicting requirements. One can imagine how incredibly complicated it would be if manufacturers had to face different laws in different states or even in different municipalities within a single state. This type of chaos could require 100 different labels and requirements for the same product, which would seem to be a contradiction of the long American heritage of mass production under favorable economic conditions in a free market.

Do not believe that our safety considerations end with the tests outlined here. New tests are continually being devised and the old ones improved by the constant effort of the Scientific Committee of CSMA's Aerosol Division. The work of this committee, made up of technical men from all phases of the aerosol industry, is directed solely toward making aerosols better and safer.

The fire record of the industry is important in considering the overall safety record. For the aerosol, there actually isn't a consumer fire record, since there hasn't been a reported incident. As the aerosol industry continues to grow, we will continue to focus attention on fire and safety considerations.★

Michigan State

(*From Page 42*)

filling: inert gas, and pressure and cold filling of the fluorinated hydrocarbons. The laboratory exercises are designated to demonstrate the characteristics of each filling method. In addition we are demonstrating the efficiency of products dispensed by various propellant combinations while providing a practical demonstration of the effect of using proper and improper spray heads, for a given product-repellant mixture.

"This work is all done on a laboratory basis for the purpose of demonstrating the essential features of the

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aerosol package. At the present time we do not have available any kind of production equipment. This course is required of every student in the packaging curriculum. Those graduate students who come from other undergraduate programs are required to take it. Supplementing this work directly is a one-term course in physical chemistry which presents the gas laws. Course content changes continuously to keep pace with developments in the field. For example, when the course is offered in the fall Freon C318, the new food propellant, will be investigated."

Mr. Lockhart reported that propellants are also discussed, as a "packaging material," as part of a preceding course called "Packaging Materials II." He said this course offers data on the characteristics, nomenclature, and structure of the propellants.

Since its founding in 1952 (when a separate curriculum on packaging was instituted as a major in Michigan State's Department of Forest Products) the Packaging course has graduated 156 men. In 1958 it was formally elevated, from an option in the Forest Products Department, to a full-fledged "School of Packaging." Dr. James M. Goff, now associate professor in charge of the school, has had the responsibility for developing the packaging curriculum.

Candidates for bachelor of science degrees are required to take a well-balanced schedule of courses. Courses in general mathematics, engineering, business, and chemistry are required, and each student is required to compile a total of 16 weeks of summer employment in the packaging field.

A tribute to the success of the course is the fact that a total of 100 students enrolled in the school last fall, and of the 156 already graduated only two have gone into jobs other than packaging! ★

•

Bourjois Buys Helene Pessl

Helene Pessl, Inc., New York marketer of the "Little Lady" and "Fifteen" lines of toiletries, has been purchased by Bourjois, Inc., New York cosmetic marketer. The company will be operated as a wholly-owned subsidiary of Bourjois, with Arnold Perlman, founder of Helene Pessl, continuing in an advisory capacity.

Notes from Europe

(*From Page* 25)

and container size from their members. As the entire European production scene is now (in "Sixes and "Sevens," so to speak) such figures, accurately reported, would furnish valuable reference guides for all participants in the European aerosol industry.★

New Cartridge Device

(*From Page* 23)

Paris office and will hit the French market soon, possibly by this summer. In fact, one of the purposes of M. Franck's January visit was to survey the potential market for both metal and plastic devices in New York, which is acknowledged as the perfume capital of this Continent.

Another reason for his visit was to explore the possibility of having the propellant cartridges made and filled in the U. S., which would considerably cut down shipping charges, handling costs, and even material costs. Since his company already has patents in France, Germany, and the U. S., the setting up of a source for cartridges here would considerably simplify supplying U. S. perfume marketers. By summer, M. Franck believes his firm will have reached a point where it is shipping only the valve and housing to the U. S.

When the plastic version is ready, M. Franck is of the opinion the innovation will find extensive use outside the perfume field. In smaller, or larger containers than the one shown in the photograph, he expects cologne and toilet water, face lotion, brilliantine, and a wide range of other cosmetic preparations will be commercially practicable.

"In France," M. Franck point out, "there is still some resistance to the use of an aerosol by those women who have long experience with the use of a particular favorite perfume. Use of this cartridge device, however, does not alter the perfume in the slightest." He suggested that the added convenience, coupled with the fact that there is no evaporation as is possible with atomizers, are counted on as major sales appeal factors.★

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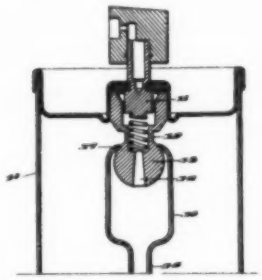
New Aerosol Patents

Listed below is a brief review of recent patents pertinent to the aerosol and related industries.

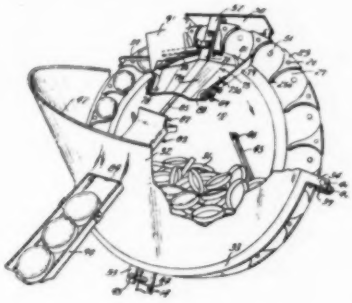
Complete copies of these patents may be obtained by writing to the Commissioner of Patents, U. S. Patent Office, Washington 25, D. C., and remitting 25 cents for each copy desired.

2,920,798. DISPENSERS. Issued Jan. 12 to Arthur J. Samuel, Pittsburgh, assignor to Gulf Research & Development Co., Pittsburgh.



In a dispensing receptacle for liquids or powdered materials which are maintained under pressure of a confined gas, an articulated eduction tube connected to a discharge nozzle mounted on the receptacle and adapted to dip into the contained material when the receptacle is in upright position, said eduction tube comprising two universally jointed sections loosely connected end to end for limited telescoping movement, the adjoining ends of said connected sections having, respectively, outwardly and inwardly extending annular surfaces which are adapted to limit the separation of the sections by their overlapping interengagement and to provide a fluid-tight seal there-between at the limit of their separation, one of said sections being telescopically slidable with respect to the other to disengage the sealing surfaces when the receptacle is inverted, whereby in such inverted position a secondary inlet is opened into the eduction tube at a level below that of the material to be dispensed from the inverted receptacle.

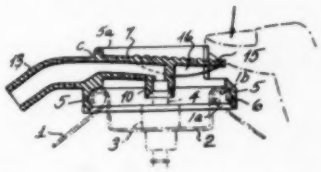
2,922,548. CAP SORTING APPARATUS. Issued Jan. 26 to Ralph F. Anderson, Rockford, Ill.



An apparatus for sorting cup shaped articles comprising a circular carrier having the front face thereof inclined to the vertical and mounted for rotation about an axis perpendicular thereto, said carrier having a plurality of annularly spaced pockets disposed at the front face thereof for receiving cup-shaped articles, means for retaining a plurality of unsorted articles at the front side of the carrier, a plunger individual to each of said pockets and mounted on said carrier for reciprocation in a direction transverse to the front face thereof, means yieldably urging said plungers to a retracted position, stop means limiting extension of said plungers whereby the plungers are movable into engagement with a cup-shaped article in the associated pocket only when the article faces in one direction, a hammer located at an article inverting station adjacent the upper edge of said carrier and mounted for movement in a direction transverse to said front face of said carrier into and out of engagement with the plungers, means on said carrier for operating said hammer each time one of the plungers on the carrier is advanced to said inverting station to thereby strike a blow to the article in the respective pocket if the article faces in said one direction and discharge the article from the pocket, and means located adjacent said article inverting station and overlying the face of said pockets adjacent the radially inner edge thereof for engaging the articles adjacent their radially inner edge as they are discharged by said hammer from said pockets to invert the articles.

■

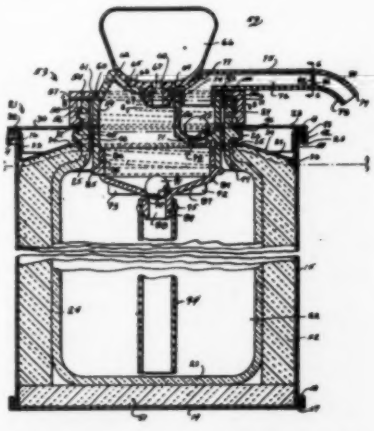
2,921,722. DISPENSING CAP FOR PRESSURE PACKED MATERIALS. Issued Jan. 19 to John Richard Focht, Yonkers, N. Y., assignor to Precision Valve Corp., Yonkers.



Dispenser comprising: a container having a closure cup carrying a dispensing valve having an upstanding tubular valve stem, and a valve operating cap provided with a base portion engaging the cup and integral with a superimposed cylindrical portion having in its periphery a cut-out extending downwardly from the upper edge of the cylindrical portion, a valve operating tab below the upper edge of the cap and integral with and resiliently secured to the inner surface of said cylindrical portion at a point opposite to the cut-out in said cylindrical portion and extending across the interior of said cylindrical portion and through said cut-out, said tab being provided on its under side with a socket fitting over the valve stem, and a discharge spout connected with said socket and extending to the exterior of the cap.

■

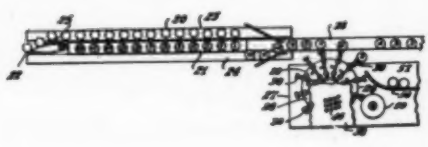
2,920,795. CONTAINER AND DISPENSER. Issued Jan. 12 to Herbert M. Piker, Wyoming, O., assignor to Hamilton-Skotch Corp.



In a device of the class described the combination of a container, a closure cap for the container, and a squeeze bulb dispensing pump carried by the closure cap and including a housing having an inlet, a one-way check valve controlling the inlet

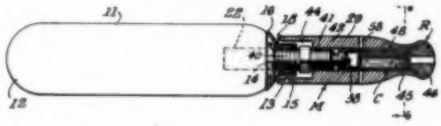
2,922,445. DEVICE FOR REMOVING IMPROPERLY FILLED CONTAINERS FROM A FILLING LINE. Issued Jan. 26 to Charles W. Osmond, Anderson Township, O., and Paul R. Fecheimer, Cincinnati, assignors to The Karl Kiefer Machine Co., Cincinnati.

In a device for selectively removing containers from a conveyor, a rotatable turret, a plurality of axially extensible arms radially disposed on said turret, said arms being movable outwardly from an inoperative to an operative position, spring means biasing said arms outwardly to their operative position, means for moving said arms inwardly to inoperative position, latch means to thereby release said arms for movement to operative position, and means mounted on the end of said arms for engaging and removing containers from the conveyor when said arms are in operative position.



to the housing, a horizontally disposed discharge spout from the housing having a passageway therethrough with a discharge outlet at its outer end beyond the container, an anti-drip dam in said nozzle passageway adjacent the discharge opening and located between the said one-way check valve and said nozzle discharge opening, and a suction hose from said housing inlet to the bottom of the container.

2,920,623. POCKET OXYGEN DISPENSER. Issued Jan. 12 to Jerome James Holt, Los Angeles.



In a portable gas dispenser, a connector for attachment to a portable gas container, a valve assembly in said connector comprising a needle valve and a differential screw rotatably mounted coaxially therewith for fine adjustment of the needle valve, and a mouthpiece assembly rotatably mounted on said connector having means engaging said differential screw for rotation thereof to adjust the valve.

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Trade Mark Applications

Applications for registration of the following trademarks were published in recent issues of the *Official Gazette* of the U. S. Patent Office. In not all cases are there strictly aerosol trademarks, however, many of the products listed below come within the category of those for which a possible future use in aerosols is foreseen.

SPRAY SWEET, for sugar product in liquid form and packaged in the form of an aerosol. Filed Aug. 3 by Pam Industries, Inc., Chicago, claiming first use June 20.

PERFUMAGIC, for perfume packaged in a dispenser. Filed Jan. 8, 1959 by Helene Curtis Industries, Inc., d.b.a. Lentheric, Chicago, listing first use as Dec. 10 of previous year.

CABANA, for toilet water. Filed July 7, 1958 by Helene Curtis Industries, Inc., Chicago, with first use claimed as April 25, 1958.

SEA-SPRAY, SEA-FOAM, and SEA-MIST, all for aerosol valves. Filed May 19 by Seaquist Manufacturing Corp., Cary, Ill., claiming first use July 1, 1957.

HANDI-MIST, for aerosol dispensing containers. Filed May 8 by The Risdon Manufacturing Co., Naugatuck, Conn., with first use reported in or about January, 1959.

BLACK FLAG (white letters on a black flag emblem) for insecticides, miticides, fungicides, rodenticides, disinfectants, and insect repellent. Filed June 26 by American Home Products Corp., d.b.a Boyle-Midway, New York, reporting first use Jan. 2, 1925.

DOUBLE GUARD, for personal deodorants. Filed Dec. 11, 1958 by Chesebrough-Pond's, Inc., New York, claiming first use Sept. 29 of same year.

KURL MATE, for hair spray. Filed March 19 by Regal Chemical Corp., Brooklyn, with first use said to have been Oct 14, 1958.

COME ALIVE, for hair tinting and coloring preparations. Filed June 27, 1958 by Clairol Inc., New York, giving first use as March 28, 1958.

PET GROOM, for shampoo for dogs and cats. Filed Dec. 8, 1958 by Aceline Products Corp., Rochester, N. Y., listing first use as Nov. 14, 1958.

ANOSPRAY, for spray for the protection of aluminum surfaces and imparting thereto a simulated chrome-like finish. Filed June 22, by Titaine, Inc., Brooklyn, N. Y., giving first use as March 9.

KILL-PEST, for paints having insecticidal qualities. Filed Dec. 8, 1958 by Central Paint & Varnish Works, Inc., Brooklyn, with first use reported as Sept. 11, 1958.

MINI-MIST, for aerosol dispensing containers. Filed April 20 by The Risdon Manufacturing Co., Naugatuck, Conn., listing first use as on or about June 15, 1958.

MULTISOL, for cleaner for carbon and gum deposits. Filed June 15 by Brulin & Co., Indianapolis, claiming first use July 15, 1954.

VI-CO, for chocolate syrups convertible into food beverages and also used as food flavorings. Filed Aug. 10 by Chocolate Products Co., Chicago, reporting first use Dec. 6, 1932.

THE JOLLY RANCHER, for flavor concentrates for making soft drinks. Filed June 24 by The Jolly Rancher Enterprise, Wheat Ridge, Colo., with first use listed as June 1, 1953.

BREETH-O-LATOR, for nebulization device, consisting of an air pump, a nebulizer, face mask, and the connections, for administering aerosol medication. Filed March 10, 1958 by Richard John Puls, M.D., Dallas, Tex., giving first use as Dec. 15, 1957.

WIF, for paint sprays. Filed Sept. 1 by Midland Industries, Inc., White Plains, N. Y., listing first use as Aug. 19.

POLY-CIDE, for chemical bactericide and odor control agent for use in agricultural and industrial processes. Filed Sept. 15, 1958 by Brooks Chemicals Inc., Cleveland, with first use given as June 19, 1950.

ZEP, for insecticides, disinfectants, deodorants, and room air fresheners. Filed Jan. 2, 1959 by Zep Manufacturing Corp., Atlanta, with first use date listed as Jan. 1, 1957.

(*Continued on Page* 80)

CLASSIFIED ADVERTISING

Address all classified replies to Box Number c/o *Aerosol Age*, PO Box 31, Caldwell, N. J. Rates for "Help Wanted" advertisements are 20¢ per word; minimum charge $3.00. Rate for individuals seeking employment is 5¢ per word, $1.00 minimum. Advertisements of new machinery, products and services accepted at the rate of $10.00 per column inch. Minimum space, one inch. Copy closing date, 10th of preceding month. *Checks must accompany all orders.*

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GROWTH OPPORTUNITY for experienced development and production chemist. Just going into aerosols—you help pick out the equipment and organize the operation. Financially sound growing company located in Southwest. Unlimited future. Address Box 209, c/o Aerosol Age.

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1 model L-1000 Oil Equipment Pres-O Filler, 400 grams maximum capacity, complete with electrical controls. Unit is in excellent condition. Very good for lab or short run packs.

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SITUATIONS WANTED:

PLANT SUPERINTENDENT presently employed by Aerosol Manufacturer, wishes new position with aggressive aerosol filler. Will relocate for opportunity, 12 years background as plant superintendent, 3 years in aerosol covering plant maintenance, quality control, and production scheduling. 40 years old. Married. Resume upon request. Address Box 207, c/o Aerosol Age.

CHEMIST—Presently employed in aerosol research, wishes career position with progressive aerosol firm. Prefers Eastern states, but will relocate. Extensive experience in aerosol product development, formulation, evaluation, and packaging. Thoroughly familiar with all factors relative to pressurized products. Product experience includes shaving creams, food products, cosmetic specialties, insecticides, etc. 29 years old, married. Please reply to Box 208, c/o Aerosol Age.

Helene Curtis Names Lipson

Helene Curtis Industries, Inc., Chicago, aerosol marketer, last month named Jack P. Lipson to the post of director of advertising.

•

Lehn & Fink Names Kirk

Roger M. Kirk, Jr., former vice-president for sales and advertising of Cook Chemical Co., has been appointed sales manager of the Lehn & Fink Division of Lehn & Fink Products Corp., New York. He succeeded Robert W. Naething, who resigned.

At the same time Lehn & Fink's Professional Division promoted Charles F. Manz, field sales manager, to the new position of general sales manager of the division.

•

Huffman to Boake, Roberts Post

R. E. Huffman has been appointed vice-chairman of A. Boake, Roberts & Co. (Holding) Ltd., and a director and vice-chairman of A. Boake, Roberts and Co., the firm's main subsidiary. He joined the board of the company in April 1959 after 45 years with the Unilever Group.

Rexall Creates New Division

The Rexall Drug and Chemical Co., Los Angeles, last month created a new chemical division and named two executives to direct its activities. Elected president of the chemical division was Ralph M. Knight, formerly vice president and polyethylene manager of the National Distillers and Chemical Corp.

Mr. Knight, employed by E. I. du Pont de Nemours from 1939 to 1952, was involved in the process design of du Pont's first polyethylene plant at Belle, West Virginia, and later was in charge of its operation.

Assisting Mr. Knight as vice-president in charge of production of the chemical division will be John R. Provo, formerly division superintendent of polyethylene manufacture for du Pont.

•

Canners Elect Milan Smith

Milan D. Smith, president of the Smith Canning and Freezing Co., Pendleton, Ore., was elected president of the National Canners Association at its 53rd annual meeting in Miami Beach, Fla. recently. John C. Hemingway, president of the H. C. Hemingway & Co., Clyde, N. Y., was elected vice-president and Carlos Campbell was continued in office as executive secretary-treasurer.

•

German Aerosol Sales Up

Aerosol sales in West Germany reached 20 million units in 1958, and are expected to reach 40 million units by 1961, reported the December issue of *Parfumerie, Cosmetique, Savons*, leading French trade periodical.

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Revlon Consolidates Advertising Accounts

REVLON, Inc., a leading aerosol product marketer, last month announced a consolidation of all its cosmetic and toiletry brand advertising at two New York agencies, Grey Advertising Agency, Inc. and Warwick & Legler, Inc. C. J. LaRoche & Co. had earlier resigned the Revlon account because of basic differences in the method of "pursuing excellence" in the company's advertising campaigns. Another agency, Mogul, Williams & Saylor, Inc., will lose all its Revlon toiletries accounts, but continues as the agency for Knomark, Inc., a Revlon subsidiary and marketer of the "Esquire" brand of aerosol and conventional shoe polishes.

Grey will handle Love Pat, Moon Drops, Ultima Cream and Make Up and Sun Bath (all previously handled by LaRoche) and Top Brass and Hi and Dri (formerly at Mogul). Most of the large volume aerosol products, Intimate Fragrance, Aquamarine Fragrance, and Satin Set, plus Baby Silicaire, went to Warwick & Legler. Grey's accounts total more than $4.5 million in billings. Warwick & Legler will handle a total of $6 million in billings. Mogul will retain another $2 million, thus implying that Revlon spends more than $12.5 million in advertising for its toiletries and shoe product advertising.

The advertising industry speculated widely about what caused the shake-up which is one of the most sizeable in the toilet goods industry in years. In addition to the four agencies involved in the February changes, Revlon has had two other major agencies in the last four years. Until 1956, Norman, Craig & Kummel handled the bulk of Revlon's advertising. In 1956 Batten, Barton, Durstine & Osborne took over, but bowed out a year later.

In advertising circles the theory was advanced that the shift had something to do with the resignation early this year of F. Kenneth Beirn as vice-president for advertising of Revlon. Mr. Beirn went to Revlon from the position of president of LaRoche.

LaRoche was Revlon's agency during the period late last year when the television quiz scandal broke. In testimony before the House Committee relative to the quiz shows, there was contradicting testimony by two Revlon vice-presidents about the extent of control the company had over tenure of the contestants on "The $64,000 Question" and "The $64,000 Challenge." These television shows are credited with having multiplied Revlon's profits seven times and its sales three times from 1955 to 1958.

Chester J. LaRoche, chairman of the LaRoche agency, in referring to the agency's decision to abandon the Revlon account, said:

> "We have taken the step primarily because there is a basic difference between client and agency in the method of 'pursuing excellence.' We believe the best result is realized when there is an agreed upon plan to achieve specific needs through a specified series of actions. Revlon, on the other hand, finds that best results are achieved when action is determined by reaction to situations and competitive moves. Certainly there is merit in both philosophies, and many advertisers and agencies are partisans of each.
>
> "We found that the account took more of our time and effort than we thought prudent, both in relation to our clients and to our own plans for continued growth."

•

Johnson Appoints Grant

Edward J. Grant has been appointed general manager and acting head of the Service Products Division of S. C. Johnson & Son, Inc., Racine, Wis. Formerly service products sales manager, he joined the company in 1936 as a salesman. He held field positions as Pittsburgh sales supervisor and New York district maintenance manager before coming to Racine headquarters in 1954.

As general manager and acting division head, Mr. Grant will have over-all responsibility for the expanding operations of the division, and will serve on the company's management committee. The division markets the Johnson's Wax line of commercial maintenance products, industrial coatings and metalworking products, agricultural emulsions and waxes, and commercial insecticides. It also has entered the specialty chemical field with diphenolic acid, a versatile chemical intermediate, and Porelon, a microporous plastic.

Samuel C. Johnson, who had been Service Products Division vice-president, has been named to a new post as vice president and regional director of Johnson's Wax activities in Europe, Africa and the Near East.

New Trademarks

(From Page 78)

MY HEART, for Cologne. Filed Nov. 17 by Allen B. Wrisley Co., Chicago, reporting first use Oct. 1, 1951.

GOLDEN EARINGS, for toilet water, perfume, cologne, and other cosmetics. Filed Feb. 9, 1959 by Flam-Haft Laboratories, Inc., New York, giving first use as Jan. 2, 1952.

AIR DOCTOR, for nonpersonal spray deodorant for use in deodorizing household, industrial, and other enclosures and the contents thereof. Filed April 28, 1958 by Tibor-Terry Corp., Chicago, claiming first use as March 21, 1958.

DEOTEX, for deodorant for clothing. Filed Dec. 26, 1957 by The Upjohn Co., Kalamazo, Mich., with first use reported as Sept. 20 of previous year.

VETIPUF, for veterinary antiseptic powder for the treatment of wounds. Filed July 21 by H. W. Naylor Co., Morris, N. Y., giving first use date as May 25.

ACHROSURGIC, for antibiotic surgical powder. Filed July 15 by American Cyanamid Co., New York, with first use date May 22.

FLAVORED-AIRE, for medicated room deodorant aerosol spray. Filed Feb. 10, 1959 by Fuld Brothers Inc., Baltimore, giving first use as Jan. 21, 1959.

PRATTS, for disinfectants, sanitizers, insecticides, rodenticides, and cattle and barn sprays. Filed Oct. 13, 1958 by Pratt Laboratories, Inc., Junction City, Ky., first use June 20, 1931.

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ter Veer Marks 40th Year

John ter Veer, secretary of Polak's Frutal Works, Inc., Middletown, N. Y., was honored by his company recently upon the completion of his 40th anniversary with PFW. A dinner in his honor was given at The Mark Restaurant, Mahwah, N. J., at which he was presented with a number of gifts from the company officers and his business associates.

Mr. ter Veer joined the company's accounting department at Amersfoort, Holland, on Feb. 1, 1920. In 1923 he was transferred to the U.S. and in 1928 was elected secretary.

d'Escayrac to Perfume Post

Bernard d'Escayrac, president of Guerlain, Inc., New York, has been elected president of the Perfumery Importers Association. He succeeds the late Maurice Levy. He has been head of the Guerlain interests in the United States since 1927.

OVER THE TRANSOM

ASIDE from the hassle over advertising, (reported on at length on page 22), the tumult in Washington over food additives and pharmaceutical prices, and the general concern over the morality of U. S. business are all competing for attention in the press. Senator Estes Kefauver, who has had the lion's share of headlines during the past few months—with his investigation of drug prices—has come up with the apparently serious proposal that a cabinet-level "Department of Consumers" be established to watch over the interests of the consumer against marketers, packagers, and retailers. In an address to a PTA meeting in his home state, he declared: "Millions upon millions of Americans are now aware of the dangerous trend toward monopoly in key industries and the effect it has on the prices they pay for drugs, food, and hardware. I might point out that a 'tin' can is 99% steel. The cost of a tin can is sometimes greater than the cost of the food it contains. And you are now aware, I am sure, that some two-cent pills are marked up to 18 cents or more by drug manufacturers. This works a hardship on the local merchant and the consumer. Nobody gains but a selected few."

* * *

March 6 is the deadline for clearance of food additives with the FDA, just in case you missed this important date in all the Washington headlines. Some 600 petitions for clearance or extension of time have been filed, and word from FDA Commissioner Larrick is that his department won't move against any product for which such a petition has been entered. The chief danger of the bill for the aerosol industry, we fear, is that some component supplier may have overlooked the bill altogether and may be banged severly on the knuckles after it goes into effect.

* * *

The Castro government of Cuba last month approved a law that could have immediate repercussions for the aerosol industry. For instance, within 180 days all pharmaceutical products sold in Cuba must be packaged or repackaged in Cuba. Companies with subsidiaries in Cuba are relatively safe, but those shipping in finished products will now have to fight government regulations on imports.

* * *

From the "Critical Shopper" column in The London Sunday Dispatch *(Jan. 17) comes this criticism of an aerosol oven cleaner: "It goes on in blobs and takes ages to spread. Not a patch on the good old paste in a tin that you brush on where you want it."*

* * *

John Rodda, head of the Fairfield Chemical Division of Food Machinery Corp., has returned to the carefree life of a student. He is enrolled at the Harvard School of Business in a course on Advanced Business Management.

* * *

The brief mention in our January issue that Abe Winer had sold controlling interest in Puritan Distributing Co., Boston custom filler to Harvey White, reported that Abe had retained minority interest in the company. The fact is Harvey White is now in full command.

* * *

College students in pharmacy, food technology, package engineering, etc. are becoming increasingly aware of the aerosol, if our mail is any indication. Our editorial department is receiving more and more letters from students requesting tearsheets of articles on specific subjects.

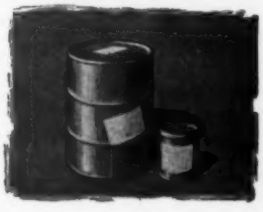
* * *

A woman, in a letter to the Ottawa Citizen, *Canadian newspaper, (Dec. 3) volunteers the information that an aerosol can of roach spray "works wonders" for removing paint from the hands. The household columnist for the paper rightly rejects this scheme with these words: "Please stop. We value our readers. It is the kerosene in the spray that removes the paint. Some insecticides, especially DDT, are very dangerous in contact with the skin. A gallon of mineral spirits costs but a few cents and is both better and safer for the wash-up job. It is also good for removing oil paint from your paint brushes."*

When it comes right down to it, this is the only sure way to "decide!"

Lower your costs with hydrocarbon propellants

A prime example of filling with hydrocarbon propellant



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